Why are tigers striped?

WILD ANIMALS

1. To frighten their prey
2. To camouflage themselves
3. To protect against the heat

© 1995 Nintendo

Tigers

The tiger has a brownish-yellow to orange-red coat, marked with irregular stripes of black. This color combination provides the tiger excellent camouflage in tall jungle grass.

2 Tigers have stripes to camouflage themselves.

Photo G. Lacz

Tiger stripes look like shadows of foliage playing across the forest floor.

In the jungle, sunlight filters through the trees in irregular patterns, creating patches of light and dark. Here, the tiger is almost invisible, even to the most watchful eye. Its coat, with irregular patterns of light and dark, blends right into the background.

That's good news for the tiger, but bad news for its prey. Silently, the tiger moves very close to another animal that's been chosen to become its next meal. Able to leap 30 ft (9 m), the tiger pounces from the jungle shadows onto its unsuspecting prey, which now becomes kitty food!

One-of-a-Kind Coat

Every tiger's coat has a slightly different pattern. Climate and location determine color and pattern. For example, a forest tiger's coat is brighter than a jungle tiger's, and Siberian tigers in snowy regions have paler fur and fewer stripes.

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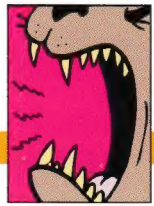
Which dinosaur could fly?



WILD ANIMALS

1 The Plesiosaurus

2 The Pterodactyl

3 None of them

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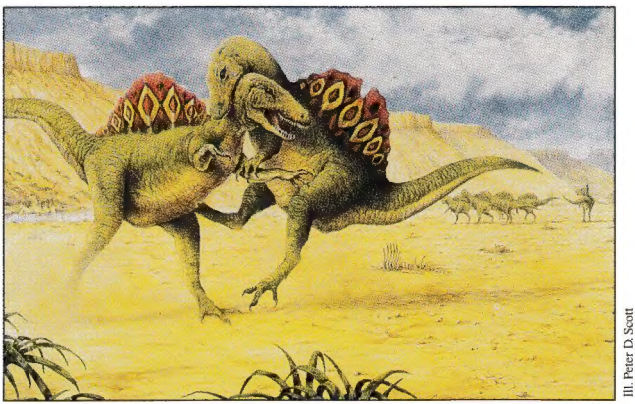
Dinosaurs

Dinosaurs roamed the Earth millions of years ago. They ruled the land. But they didn't fly or swim out to sea. Other prehistoric animals had the jobs of ruling the skies and oceans.

3 None of the dinosaurs could fly



Ill. Peter D. Scott

Around 110 million years ago, two Spinosaurus–large meat-eating dinosaurs–fight for leadership of the herd.

Scientists say dinosaurs lived during the Mesozoic Era, a period of time from 225 million to 65 million years ago. It's a time also called The Age of Dinosaurs. Since the first dinosaur fossil was found in 1674, scientists have discovered and studied more than 340 different kinds of dinosaurs. Some were as small as a wren, others were gigantic. Some walked on four feet, others walked on two. Some ate meat; others ate plants. But even though some of the big dinosaurs spent time in marshes, lakes, and swamps, all dinosaurs made their homes on land.

Other creatures lived on Earth during the Age of Dinosaurs. These included the Pterodactyl, a flying reptile that ruled the skies, and the Plesiosaurus, a sea serpent that ruled the sea. Both of these animals were prehistoric, but they were not dinosaurs.

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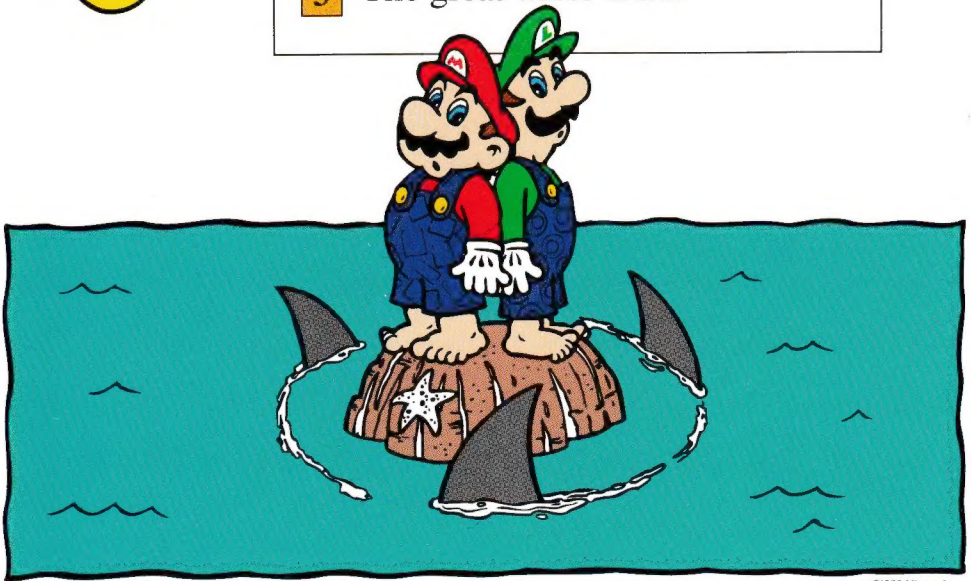
Which is the most dangerous shark?

WILD ANIMALS

1 The blue shark

2 The pilgrim shark

3 The great white shark



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Sharks

The great white shark's normal meal is fish, but it has been known to devour human flesh if it gets in the way!

3 The great white is the most dangerous of all sharks.

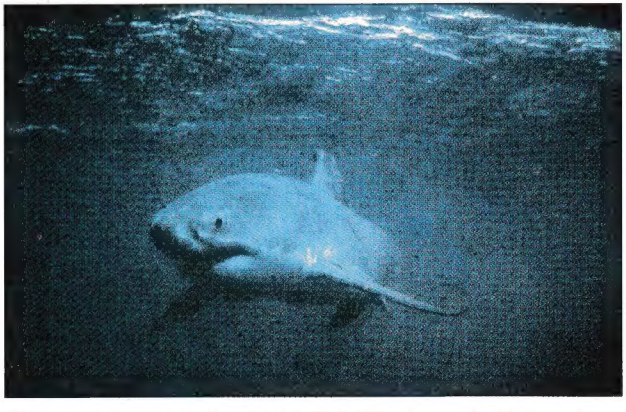

Photo Amsler / Jacana

The great white Australian shark is 32 ft (10 m) long. And it doesn't have a great disposition when it's hungry.

Home of the Sharks

Great whites frequent the waters off Southern Africa and Australia. Daring divers go down in metal cages to record the sharks' movements on film. Some other types of sharks are occasionally dangerous, too. For example, the tropical tiger shark or hammerhead. It has a flattened, hammer-shaped head and strange sideways projections, and at times can get nasty.

But the biggest sharks are not the most dangerous. The whale shark, at home in the tropical seas, measures 65 ft (20 m) long and weighs many tons, but it only feeds on plankton. So does the pilgrim shark, common in European waters. It is 40 ft (12 m) long and weighs about 8 tons (7 metric tons). The smallest sharks measure less than 3 ft (1 m) and many eat only shellfish and mollusks

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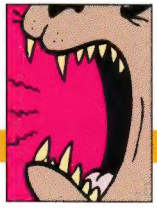
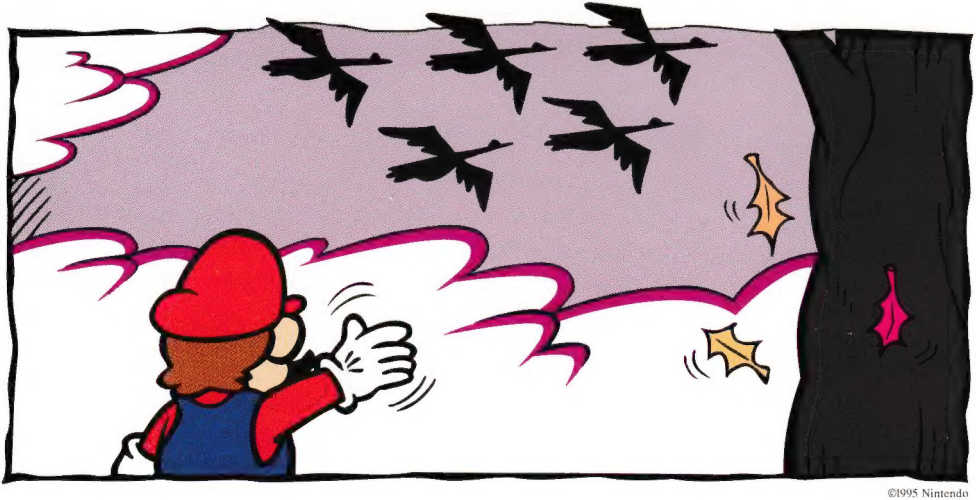
Why do animals migrate?



WILD ANIMALS

1. To get a change of scenery
2. To find better living conditions
3. To see famous sites



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Migration

Some animals travel in search of more favorable living conditions at that particular time.

2 Animals migrate to find better living conditions.

Photo © G. Lacz

In Africa, herds of up to 2 million wildebeest (gnus) migrate each year in search of food. They travel from southern Tanzania to northern Kenya, where the rainy season has produced lots of grassy pastures.

In winter, some animals can't find food or shelter. So they migrate to warmer areas, where food and shelter are available. When spring comes, the animals reverse directions and return home.

How They Move

Animals migrate by air, water, or land. Some travel alone, others in groups. Some travel non-stop, others stop over at places on the way to their destinations. Some make short trips, like frogs hopping from a stream into a nearby pond to breed. Others make long trips, like Arctic terns flying round trip to Antarctica—a total of 22,000 miles (35,400 km)!

Knowing When to Go

Environmental changes can trigger migration. In autumn, the onset of cooler weather and decreasing hours of sunlight stimulate the release of chemicals in the bodies of birds. This affects the animals' behavior, sending them in search of warm weather and more sunlight. And some migrators, like salmon and whales, seem to have an inborn calendar that tells them when to leave!

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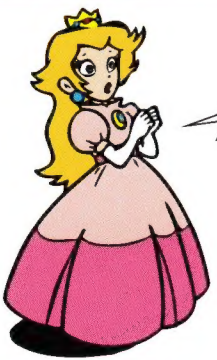
Why do some animals hibernate?

WILD ANIMALS



1. To hide from predators
2. To survive during cold winter months when food is scarce
3. To make up for times when they were really tired and couldn't sleep

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Hibernation

In winter, some animals migrate to warmer places. Others hibernate to protect themselves from the cold and reduce their need for food.

2 Some animals hibernate to survive the cold winter months when food is scarce.

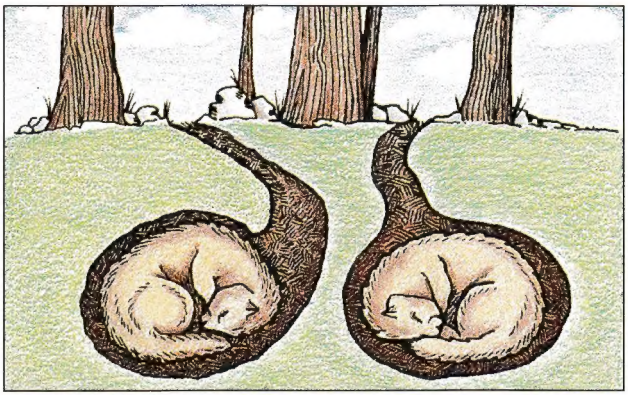

Illustration by Irene Miedzinski

Many animals curl up in hibernation to limit their loss of body heat. Others sleep together with bodies intertwined so they can share their body heat.

Hibernation is a sleeplike condition some animals enter in winter. During hibernation, an animal's body temperature becomes lower than normal, and its breathing and heartbeat slow down. The animal needs far less energy than normal to stay alive, and it lives on fat stored in its body. Common hibernators are: ground squirrels, skunks, snakes, raccoons, woodchucks, turtles, frogs, bumblebee queens, and some fish.

How Long a Sleep?

The amount of time hibernators sleep varies. Warm-blooded animals, like mammals and birds, rotate periods of deep hibernation with periods of wakefulness. They can wake themselves from hibernation at any time, often to eat food stored in their caves or burrows. Cold-blooded animals, like amphibians and reptiles, spend the entire winter in deep hibernation. They can only be awakened when their environment warms enough to heat their bodies.

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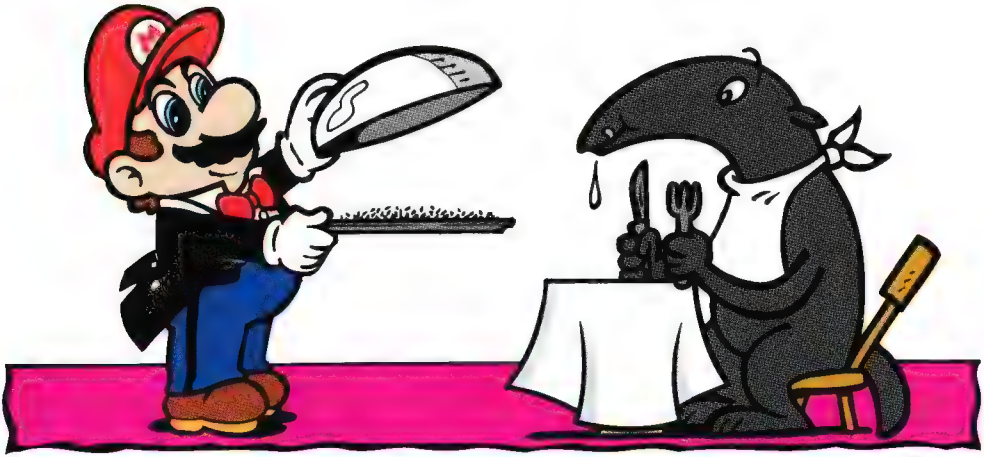
What does an anteater eat?

WILD ANIMALS

1. Honey
2. Termites
3. Spiders



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Anteater

The Giant Anteater lives in forests and on the prairies of tropical America. Just one anteater can devour 30,000 termites (white ants) a day!

2 An anteater eats termites.

Photo © Gohier/Jacana

The anteater's coat blends with the savanna grasses in which termites build their nests.

An anteater feeds primarily on termites or white ants. The long-snouted predator is a nocturnal animal—it hunts at night. An anteater has no teeth, but the way it eats, it doesn't need them!

A Sticky Situation

The anteater's tongue is a dangerous trap for termites. When it's time to eat, the anteater uses its long hooked claws to slash and tear at the nearest termite nest. Once its cut an opening in the nest, the anteater slides its long nose into the opening. Then it sticks out its tongue, that's about 24 inches (60 cm) long and coated with glue-like saliva. Next, the anteater takes a deep breath and, as if it were using suction from a vacuum cleaner, the termites are sucked right onto the anteater's tongue, where they stick. Back into its mouth goes the anteater's tongue where the insects are chewed by horny tips that line the anteater's mouth and cheeks. In just one minute, the anteater's tongue will enter and exit that termite nest 60 times!

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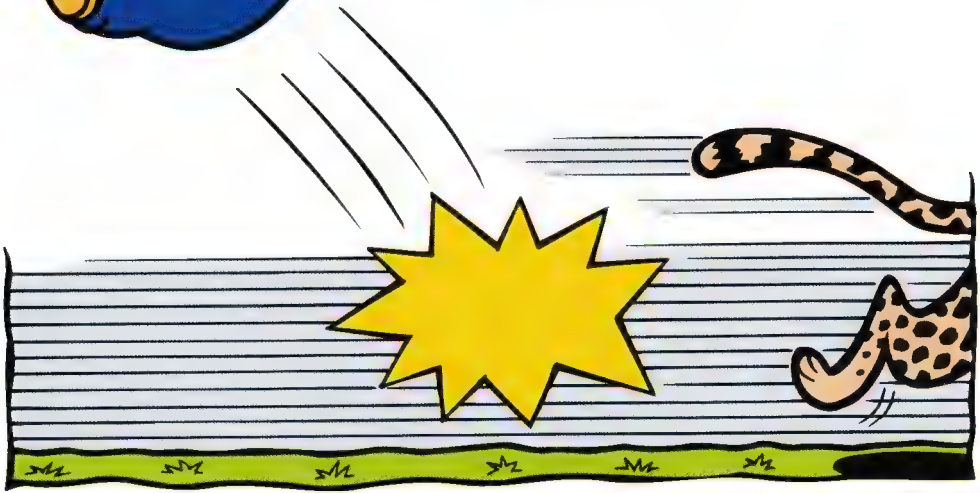
What's the fastest land animal?

WILD ANIMALS

1 Horse

2 Gazelle

3 Cheetah



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Cheetah

At speeds up to 70 miles (110 km) an hour, an African cheetah chases a small deer or antelope. The cat leaps, knocks its live prey to the ground, then bites through its neck to make the kill.

3 The cheetah is the fastest land animal.

Photo © Weintraub / Jacana

A cheetah's claws aren't retractable, so it can't climb trees. But as it runs, the animal can spring 9 ft (3 m) off the ground to fell its prey!

The cheetah holds the record as the fastest four-legged land animal. During a chase to bring down prey, a cheetah can't be beat. But the animal runs out of breath and tires quickly if the chase lasts more than 330 yards (300 m). After a chase, the cheetah needs at least 15 minutes to recover. So if the prey can evade the predator long enough, it can get away when the cheetah stops, breathless and unable to continue.

A Natural

The tawny cheetah is built for speed, with a slender body and long, strong legs. The animal measures about 39 inches (1 m) in height at the shoulder. Its 7 ft (2.25 m) length includes a tail that measures 2 ft (75 cm), which helps the cheetah maintain its balance as it runs. To reach its prey, the cheetah must take it by surprise, approaching only when the prey is very near, then chase and catch it before running out of breath.

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D2 491 05-02

How much does an adult hippo weigh?

WILD ANIMALS

1. About 663 pounds (300 kg)
2. About 1,000 pounds (679 kg)
3. About 3.5 tons (3,200 kg)

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Hippo

Scientists say the presence of the hippo, one of the world's largest land animals, was first recorded about 7 million years ago. An adult hippo can weigh in at more than 3.5 tons (3,200 kg)!

The hippo, a huge four-toed mammal, lives in groups of 6-15 in the streams of Africa. The average adult measures 5 feet (1.5 m) at the shoulder and is 15 ft (4.5 m) in length. This heavy herbivore's head alone weighs 442 pounds (200 kg) and its lower teeth may be as long as 3 ft (1 m). Its massive body rests on short legs, and its rounded belly is so low it touches the ground as the animal moves through a swamp!

3 The adult hippo weighs about 3.5 tons (3,200 kg).

Photo © Varin/Jacana

When a baby hippo's born, it has pink skin and weighs about 66-88 pounds (30-40 kg). It reaches adulthood in seven years, and could live as long as 40 years.

Watery World

Most of a hippo's life is spent in the water. The animal leaves only to warm itself in the sun or to graze in search of the 442 pounds (200 kg) of plants it needs to eat every day to survive. Development of the hippo's chest cavity and the animal's thick layers of fat help it float. And this mammal can hold its breath underwater for up to 10 minutes!

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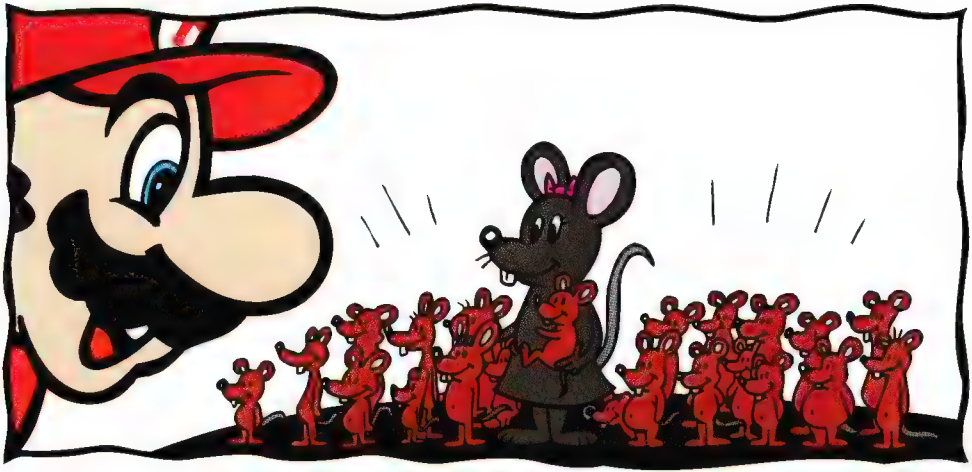
How many babies could a mother mouse have in one year?

WILD ANIMALS

1. 10
2. 40-85
3. 70-100



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Mouse

A female mouse can have babies after she's 45 days old. She may have a litter of 4-7 babies once every 21-30 days. So in one year, a female could give birth to 40-85 mice!

2 A mother mouse could have from 40-85 babies in one year.

Photo © Layer/Iacuna

When the babies are born they're helpless and need the care of their mother. But within weeks the little ones will be out on their own, building nests and starting their own families.

The ability of mice to have so many babies is nature's way of saving a species. You see, mice have no special form of defense, so they're easy prey for other animals like cats and owls. If females didn't have enough babies to replace those killed, the species might become extinct. But if all the babies survive and have more babies in turn, one pair could give birth to a half million mice!

Birth and Growth

Twenty days after mating, a female mouse gives birth to a litter of tiny, pink, furless, and sightless babies. When they're 10 days old, the mice get soft fur and after 14 days their eyes open. When the mice are 18-days old, their mother no longer nurses them. The babies take quickly to their independence, facing any dangers alone. Finally, after 3 weeks, they go off to build nests of their own.

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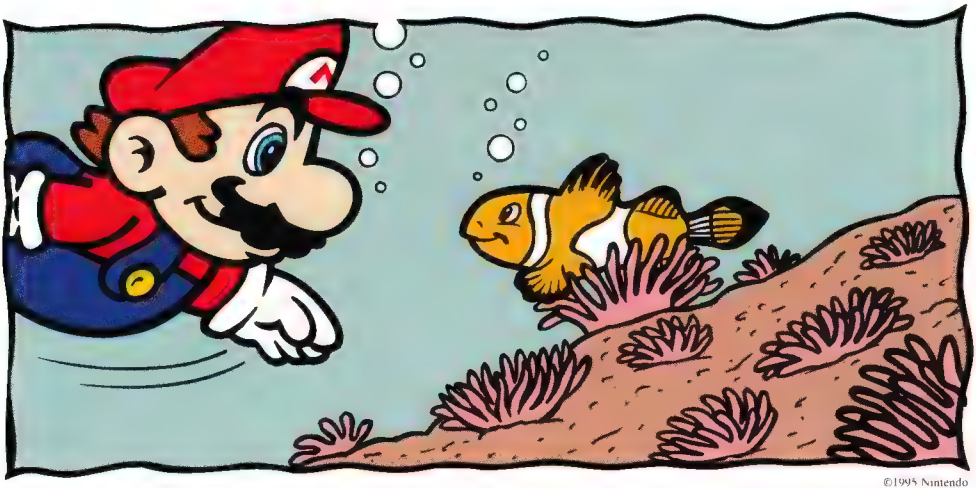
D2 491 06-19

Which fish doesn't fear poisonous sea anemones?

WILD ANIMALS

1. The catfish
2. The clownfish
3. The lionfish



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Clownfish

The sea anemone uses its tentacles to paralyze prey that swims into its "arms." Only a clownfish can rub against the outstretched tentacles without fear of death.

2 The clownfish is the only one that doesn't fear poisonous sea anemones.

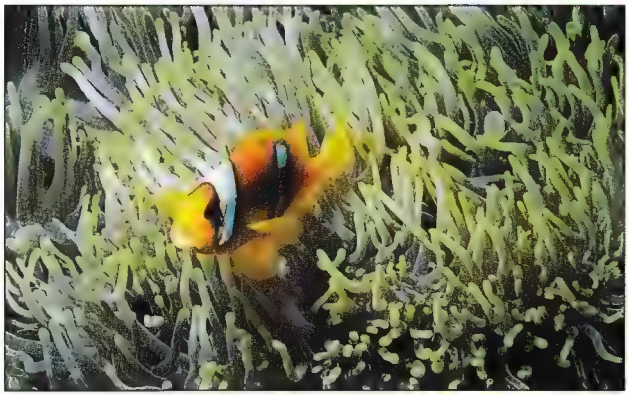

Photo © Yves Gladu/Explorer

In exchange for bringing prey into its waiting arms, the sea anemone provides a "safe house" for the clownfish.

The sea anemone is a plant-like animal. It's tentacles wave invitingly to any fat fish or crab passing by. Each tentacle contains stinging oil. When the prey touches one, a discharge of tiny poison threads shoot out to paralyze it. Then the anemone eats it.

Living in Harmony

The clownfish is the only sea creature allowed to touch the sea anemone unharmed. Nature made the clownfish immune to the anemone's poison. It's a matter of give and take. The little clownfish, easy prey for faster and larger predators, darts into the anemone's arms when pursued, bringing the predator with it. The anemone zaps its free meal and the clownfish hides until it's safe to come out—an example of real cooperation.

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How long do baby bears stay with their mothers?

WILD ANIMALS

1. Six months
2. About 1 1/2 years
3. Three years

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Bears

Bears breed every two years during March or April. The following winter, the female bears give birth to 1-4 cubs. They grow up at their mother's side until they reach the age of 1½.

2 **Bear cubs stay with their mothers for about a year and half.**

Photo © Labat/Jacana

A bear reaches adult weight—442-663 pounds (200-300 kg)—around the age of two.

When bear cubs come into this world, like other mammals, they depend on their mother for everything. By instinct, the cubs find their mother's milk supply and lie next to her warm furry body to nurse. Although bears aren't true hibernators, they do take very long winter naps, so the mother may drift off to sleep again, but she's always aware of the presence of her cubs around her.

First Excursions

March brings warmer weather and the bears leave their den. Through the summer months, the mother teaches her cubs to hunt and feed. When cold weather returns, the bears return to their den for the winter. The following spring the cubs leave the den to go off on their own.

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How does a bat hunt at night?

WILD ANIMALS

1. By using its gifted sense of sight
2. By using echoing sounds
3. By using its keen sense of smell

©1995 Nintendo

Bats

Bats are excellent hunters, thanks to the high-frequency sounds they emit to help guide them through the night.

2 A bat hunts at night by using echoing.

Photo © Cordier Jacana

To hunt, a bat sends out high-frequency sounds. When they hit an object, they bounce off, sending vibrations back to the bat's receptive ears.

Bats are night hunters. As these small mammals search for food, they continually emit short, high-frequency squeaks in flight. Each bat species has a different sound. Some squeaks are so high-pitched that the human ear can't hear them.

Echolocation

A bat's squeaks help it "see" by a process called echolocation, that works like radar. When the sound waves from a bat's squeak meet an object—even a very tiny insect—they bounce an echo back to the bat's super-sensitive ears. The echo is transmitted to the brain, where it's instantly analyzed. From the intensity of the sound and the time it took for the echo to bounce back, the brain determines the size and position of the object, and the speed at which it's moving. This gives the bat a mental picture of what's ahead. "Seeing" a flying insect, the bat zooms in and snatches its prey "to go!" Now that's fast food!

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How tall is an adult giraffe?

WILD ANIMALS

1. About 18 feet (5.5 m)
2. About 33 feet (10 m)
3. About 49 feet (15 m)

©1995 Nintendo

Giraffe

The giraffe is the tallest living mammal. An adult male giraffe reaches a height of 18 feet (5.5 m). Its head and neck alone are about 6.6 feet (2 m) long!

1 **The adult giraffe is about 18 feet (5.5 m) tall.**

Photo © Leroy / Explorer

The giraffe, like many other animals, ambles—moves both legs on one side forward, then both legs on the other side.

Giraffes live on the savanna, or grasslands, of Africa. Using their long necks and tongues, these herbivores graze on leaves at the tops of trees and thorny bushes. Giraffes sleep standing up because it's difficult and tiring for them to lie down. Just to get a drink, they have to spread their 6-foot-long (1.8-m-long) front legs far apart, then lean wa-a-ay down to reach the water!

Peaceful Plant-eater

The reddish-brown patches or markings on each animal's buff-colored coat are different. Markings on some giraffes resemble a white "net" of large red-brown links; markings on others appear more "star-like." These peaceful animals are related to deer. Like their relatives, giraffes are speedy runners, eat only plants, and have small horns on their heads.

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D3 054 08-03

Are lions social animals?

WILD ANIMALS

1 No, most lions live alone after they reach the age of one.

2 Yes, lions live in groups of 10-30.

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Lions

The lion, king of the jungle, is a social animal. This good father and faithful spouse spends his life with 10-30 other lions.

2 Yes, lions live in groups of 10-30.

Photo © A. Bertrand, Jacana

Prides of lions roam free in Kenya's Masai Mara National Reserve, 155 miles (249 km) west of Nairobi.

Lions are among the largest of the big cats of Africa and Asia. Only tigers are larger. Lions live in prides of 10-30, all under the supervision of a large, shaggy-maned male.

Family Life

During the mating season, several lions may choose the same female, creating violent battles between the males. But once a lioness chooses the male she wants, the others move on. Lions mate for life and usually have two to four cubs per litter. When cubs are born, the lion brings them food so the lioness can remain to protect her babies. When the cubs are a little older, the family rejoins the pride. The father is once again in charge of defending the pride's territory, while the lioness hunts for food. When she returns with food, the lion eats first, even before her cubs. He always chooses the best bits, but the other lions accept this. They know a well-fed, healthy lion will be better able to defend their territory.

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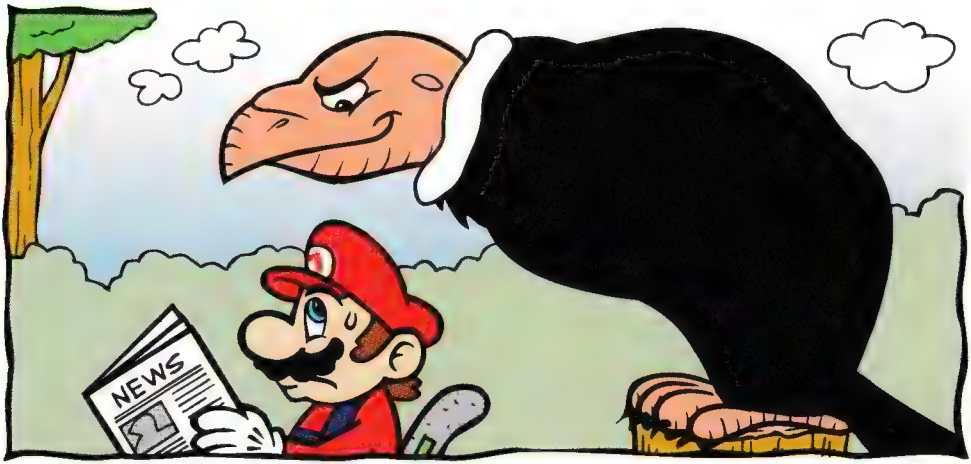
Which is largest predatory bird?

WILD ANIMALS

1. Andean condor
2. Bald eagle
3. African vulture



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Condors

With its wingspan of 10 feet (3 m), the Andean condor is most impressive in flight over the mountains of South America. The condor is the largest of the predatory birds.

1 The Andean condor is the largest predatory bird.

Photo © Hurot / Jacana

The condor has black feathers and its collar is white. The bare, rough skin of its head, neck, wattle, and crest is red.

High in the Andes mountains along the coastline of Peru and Argentina is condor country. The 26-pound (12-kg) bird lives at altitudes of 9,840-22,960 feet (3,000-7,000 m). At these dizzying heights, condors lay their eggs, not in nests but in caves and holes or on boulders. There aren't many Andean condors, and the species is threatened by extinction because females lay only after age 7, and then only one egg every two years. These giant predators are remarkable gliders, capable of soaring for hours over extensive territory.

Soaring Scavengers

Condors feed off dead animals and often follow livestock and herds of wild cattle. Along the coastline, condors eat the remains of marine animals that waves wash up on the beaches.

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D3 054 10-02

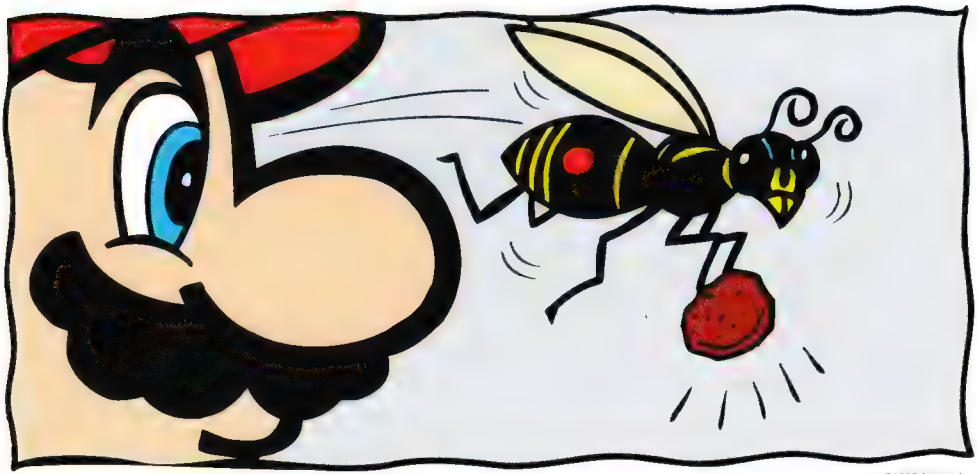
With what do paper wasps construct their nests?

WILD ANIMALS

1 With wax

2 With wood

3 With rocks



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Wasp Nests

Paper wasps, construct their nests from a thick pulp of chewed wood fiber mixed with saliva. When the mixture dries, it looks like cardboard.

2 Paper wasps build their nests with wood.

Photo © Ross / Jacana

The queen lays one egg in every cell. It will come out a larva, metamorphose into a nymph, and finally become a wasp.

The wasp—a relative of the bee and ant—is recognizable by its narrow abdomen and the female's stinger. After spending an inactive winter, the fertilized female starts to build the nest, pursued by the male worker wasps.

Building a Nest

To make a cell for each egg, the paper wasp chews weed stems and old wood fiber into wads. She uses her mandibles to spread the pulp in layers and builds several stories of cells in the shape of a sphere or cone. Potter wasps, mud daubers, and mason wasps use mud to construct their nests. A nest may be suspended from a tree, attached to the gutter of a roof, built in a sheltered hollow of a tree, stuck in a crack on a wall, or built completely underground. Some wasps have been known to build giant nests more than 3 feet (1 m) in circumference.

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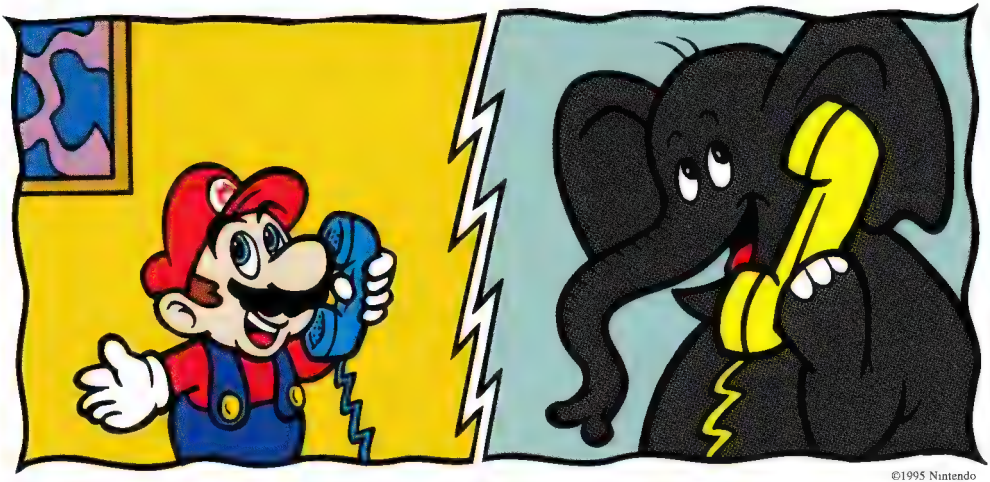
How do elephants communicate long-distance?

WILD ANIMALS

1. By making loud trumpeting sounds
2. By making low-frequency sounds
3. By waving their trunks as semaphores



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Elephant Conversation

Elephants send information over long distances by uttering low-frequency sounds below the range of human hearing.

2 Elephants communicate by making low-frequency sounds.

Photo © P. Cheuva / Explorer

Elephants travel in large herds, living on grass and leaves and communicating through infrasounds.

Scientists have discovered that elephants can transmit deep, low-frequency sounds, or infrasounds, between their herds. Researchers have electronically captured the elephants' mysterious language on super-sensitive tape.

Long-Distance Calls

People can't hear these low-frequency calls, but to elephants they are as loud as a blaring horn. Because of these unique sounds, elephant herds can communicate with one another over distances of 2.5 miles (4 km) or more. When the herds are communicating, each stands very still, forming a line that faces the direction of the other herd, ears to the wind and eyes closed. This keeps them from being distracted by other sounds or movement. Scientists say elephants communicate this way for various reasons—mating, directing other herds to water, or simply saying hello.

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Do all mosquitoes bite?

WILD ANIMALS

1 No, only males do

2 No, only females do

3 Yes all mosquitoes bite

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Mosquitoes

Female mosquitoes bite in order to sip blood needed for the development of their eggs. Males feed only on sap and the nectar from plants.

2 No, only female mosquitoes bite.

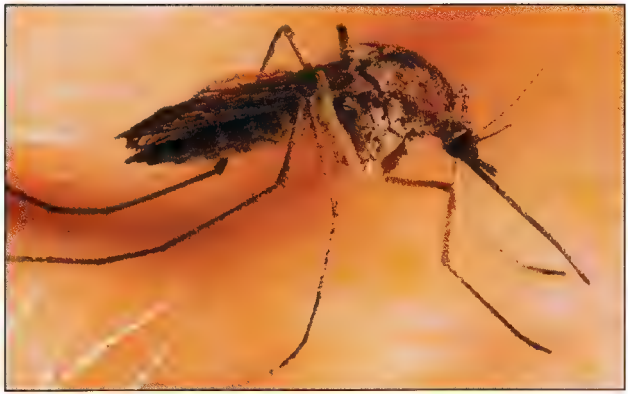

Photo © Moiton / Jacana

The humming noise made by mosquitoes is from their wings that beat about 1,000 times a second!

There are 3,000 different species of mosquitoes. The pesky insects are found everywhere in the world, even in the Arctic! Some mosquitoes spread terrible diseases, like encephalitis, malaria, and yellow fever. But many don't spread disease, they just give a painful bite.

When is a bite not a bite? A mosquito's mouth has a tube or proboscis that, like a straw, allows it to sip liquid. The female doesn't actually bite—she can't open her jaw. She stabs through your skin with the six needle-like stylets in the middle of her proboscis. Her saliva keeps your blood from clotting. Since most people are allergic to this saliva, the bite begins to itch and a welt appears. The amount of blood sipped by a mosquito varies, some drink as much as 1 1/2 times their own weight!

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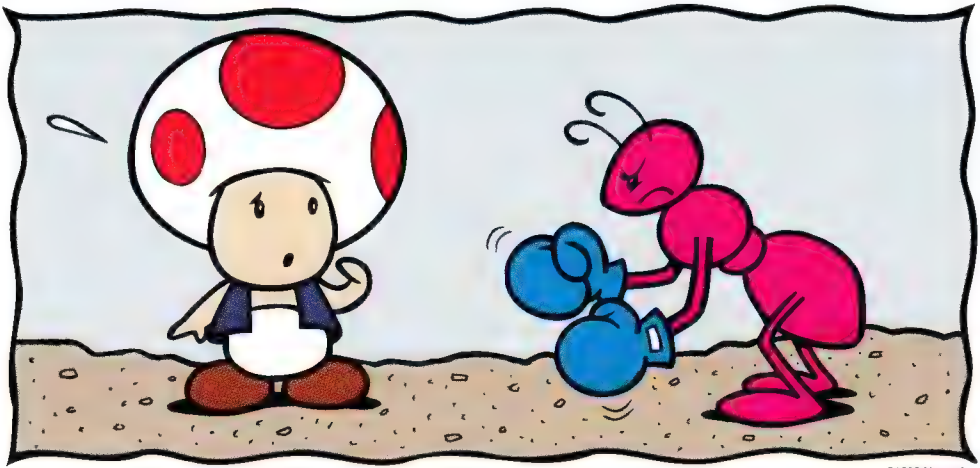
How do some ants defend themselves?

WILD ANIMALS

1. With sharp claws
2. By butting heads
3. By spraying or injecting acid



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Ants

If you tease a red ant, it defends itself by squirting you with acid that stings and burns. And the insect can shoot the acid from about 1 foot (30 cm) away.

3 Ants defend themselves by spraying or injecting their enemies with liquid acid.

Photo © P. Pilloud / Jacana

To defend itself, the ant shoots out a stream of formic acid.

Ants are prey for many other animals, including spiders, frogs, toads, lizards, and birds. So it's no wonder that Mother Nature equipped these hard-working insects with the ability to defend themselves by stinging, biting, or spraying their enemies with poisonous liquids.

Defense Mechanisms

In order to paralyze its enemy, the red ant violently discharges from its stomach a chemical that contains formic acid. If a human is sprayed with this acid, it causes irritating but short-lived skin burns. More dangerous is the tropical ant, like the fire ant, that injects its poison into a person's blood stream by stinging him or her. Certain Indians of the Amazon use the fire ant's poison on their hunting arrows to bring prey down with one shot—if the arrow itself doesn't kill, the poison will.

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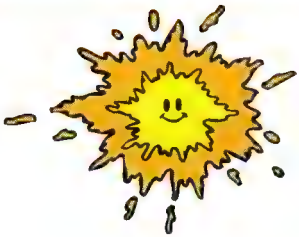
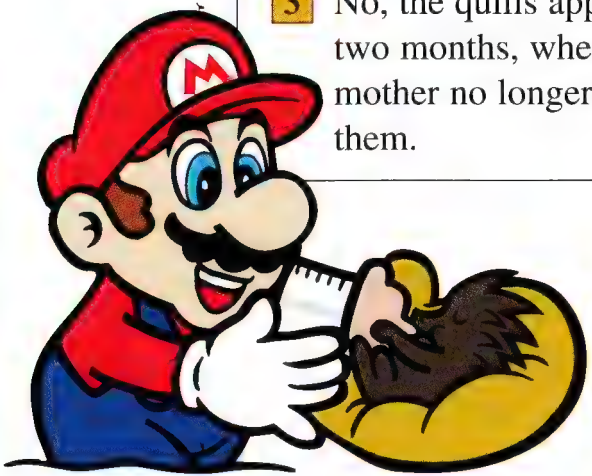
D3 054 11 15

Are hedgehogs born with quills?

WILD ANIMALS



1. Yes, they have all their quills at birth.
2. No, but soft quills begin to grow right after birth.
3. No, the quills appear after two months, when their mother no longer nurses them.



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Hedgehogs

Hedgehogs have no prickly quills when they are born. But the stiff needle-like quills begin to grow immediately to provide protection for the little animals.

2 **Hedgehogs aren't born with quills, but the hollow hairs begin to grow immediately after birth.**

Photo © R. David / Explorer

In cold weather, hedgehogs hibernate. They roll into spiny little furballs and sleep until spring's warmth returns.

The hedgehog, found in Asia, Africa, and Europe, measures about 9 inches (23 cm) long and looks somewhat like a porcupine. It has short ears, short legs, and a short tail, but a long nose. A night hunter, the hedgehog eats insects. As a matter of fact, some people keep the little animals as pets to help get rid of insects!

Outer Protection

A baby hedgehog's quills are white, thin, and soft. Gradually they toughen, becoming brown and prickly. The hedgehog sheds these "baby" prickles twice, then grows hard quills that act as a means of defense. If a hedgehog feels threatened, it rolls into a little ball of bristly prickles. That's why this "sharp" defender has few enemies—after all, who would want to attack and get stuck with those quills?

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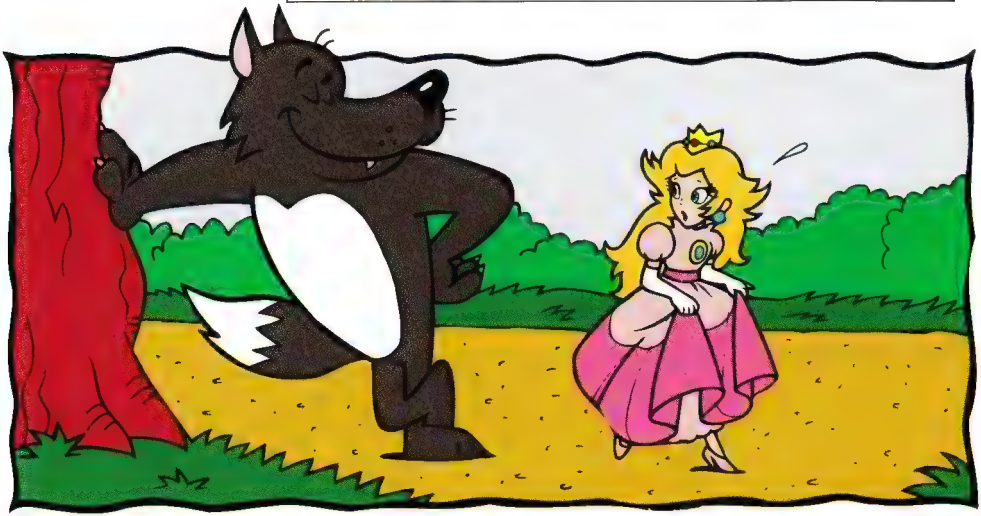
Do wolves still exist in the wild?

WILD ANIMALS

1. No, the last ones were killed in 1920.
2. Yes, but less than 200 in the world.
3. Yes, about 200,000 in the world.



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Wolves

Although wolves can be seen at many zoos and animal parks, only about 200,000 roam free in the wild. They have become endangered species.

3 **About 200,000 wolves still live in the wild.**

Photo © McHugh / Jacana

A pack of wild wolves works together to attack its prey. And together, pack members share the carcass.

There are two species of wolf: the gray or timber wolf and the red wolf. Both belong to the Canis order, making them relatives of the fox and dog.

Grays and Reds

The gray wolf measures up to 3 feet (90 cm) in height at the shoulder and weighs approximately 100 pounds (45 kg). The number of gray wolves in the wild has been greatly reduced except in some extremely isolated areas. Once the smaller red wolf, weighing just 35 pounds (16 kg), ran free in southeast and central Texas. Today the red wolf is an endangered species that environmentalists say may be extinct in the wild.

Wild Wanderers

There are still about 100,000 wild wolves living in the forests of Russia. It's estimated there are another 70,000 in North America, 700 in Spain, and 100 in Italy. But the last wolf living in the wild in France was killed in 1954.

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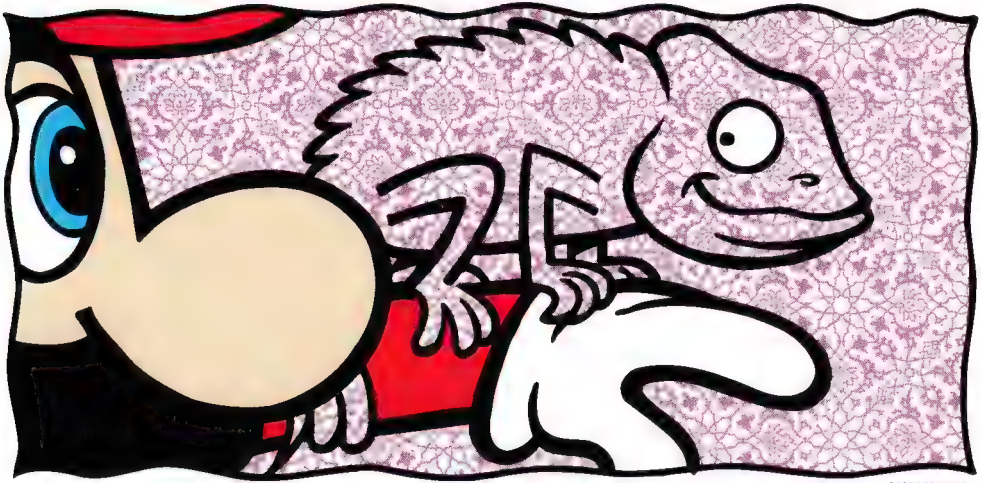
Why does a chameleon change colors?

WILD ANIMALS

1. Because of changes in light, temperature, or its mood
2. As a defensive camouflage
3. To look fashionable



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Chameleons

Chameleons are known for changing color. Some people think this is a form of camouflage that allows the animal to blend into its environment, unseen by its enemy. But this is not the case.

1 A chameleon changes color as a result of changes in light, temperature, or the animal's mood!

Photo © M. Loup / Jacana

Even though chameleons don't really change color to camouflage themselves from predators, it sometimes works that way!

A chameleon changes color in response to variations in light or temperature, or as an emotional reaction to its environment. For example, if it's frightened or angry, the chameleon turns black. When it's happy, it turns green. When cold, the animal flattens its body to better capture the sun's rays, and turns brown. When it's sleeping, a chameleon becomes gray.

How Does It Do That?

A chameleon's skin contains substances on which light rays separate. Deep under its skin are lots of nerve fibers and cells with specks of color grouped in three layers—yellow on top, brown-black in the middle, red on the bottom. The chameleon's emotions influence the distribution of the color in the cells beneath the skin, causing its color to change.

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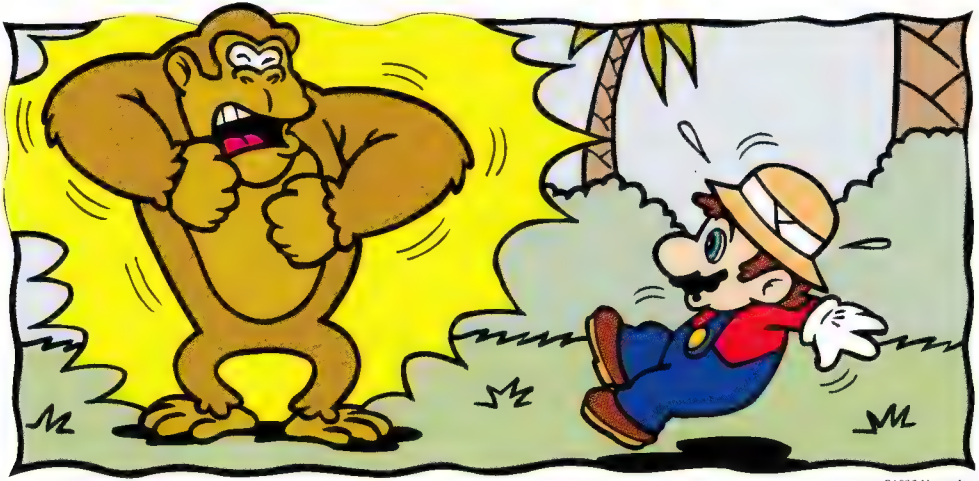
Why do gorillas beat their chests?

WILD ANIMALS

1. To show they are happy
2. To frighten their enemies
3. To play music



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Gorillas

To frighten off an enemy, a gorilla slaps its cupped hands against its chest to make a loud noise. Then it emits a howl and strikes a pose as if about to attack… but it won't.

2 Gorillas beat their chests to frighten their enemies.

Photo © Arthus-Bertrand / Jacana

Gorillas live in clans, each ruled by the eldest male.

Gorillas are shy and friendly, and won't fight unless threatened. They just have a complex system of communication that includes mime, attitude, gestures, and vocal signs. One of the first things a baby gorilla does is imitate the gestures of adults.

Gorilla Language

A gorilla's growl and rumble may signify nervousness about an approaching storm, even before a clap of thunder announces its arrival. When there's a dispute, the oldest male steps in, grunts and snarls, and gets things back to normal. If noisy young gorillas disturb an older gorilla's nap, the elder shows its displeasure with a kind of belching. And just as we may act differently around some people, gorillas make a special throaty sound to signify the presence of relatives and friends.

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Why do squirrels hide food?

WILD ANIMALS

1. To stock up for winter
2. Because they enjoy digging holes
3. So their enemies won't have food

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Squirrels

Squirrels don't hibernate in winter. So they hide food in the autumn to help them make it through the long cold months ahead.

1 Squirrels hide food to stock up for winter.

Photo © J.P. Varin / Jacana

One squirrel can pick 40,000 pine cones a year. It eats the seeds and leaves the shells.

Squirrels don't pile up provisions in their cozy moss-lined nests. Instead, they bury the food supply in many different hidden reserves around their territories. Then, when the winter winds blow and food is hard to find, a squirrel can return to its hidden treasure and dig up a meal or two!

Gathered Goods

Sometimes, thanks to a good sense of smell and its memory, a squirrel returns to its various hiding places to retrieve food. But this furry, bushy-tailed little mammal is frequently forgetful, so its "treasures" are often discovered and enjoyed by some other mammal or bird. And even if it does remember where the food is, autumn's humidity may have caused germs to rot the buried food. In such cases, the squirrel must be content with pine cones it finds buried under the snow or the bark and sap of the fir trees from which they fell.

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Which is the most dangerous fish in South America's rivers?

WILD ANIMALS

1. The hatchet fish
2. The silver swordfish
3. The piranha

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Piranha

The piranha is, without a doubt, the most voracious fish living in the freshwater rivers of South America. There are 25 different species of this flat-sided fish: all are avid eaters.

3 The piranha is the most dangerous fish in South America's rivers.

Photo © Yann Visage / Jacana

Indians who fish for piranha know they'd better wait until the sharp-toothed creature is definitely dead before taking it off the hook!

Piranha live in shoals, sand banks, and reefs. Normally they eat small fish or seeds and fruit that fall into the water from trees along the river banks. But sometimes, piranha have been known to display very dangerous behavior, despite their small size—about 1 foot (30 cm) long.

Daggerlike Dentures

Piranha usually travel alone in search of a meal. But occasionally food is scarce, and one piranha alone hasn't got a chance of finding a decent meal. So as many as 1,000 piranha travel together, like a pack of wild dogs, and attack large-sized animals. Sharp triangular teeth allow the frenzied fish to cut apart and devour a water buffalo or a crocodile in just a few minutes! They have been known to attack humans only as a last resort.

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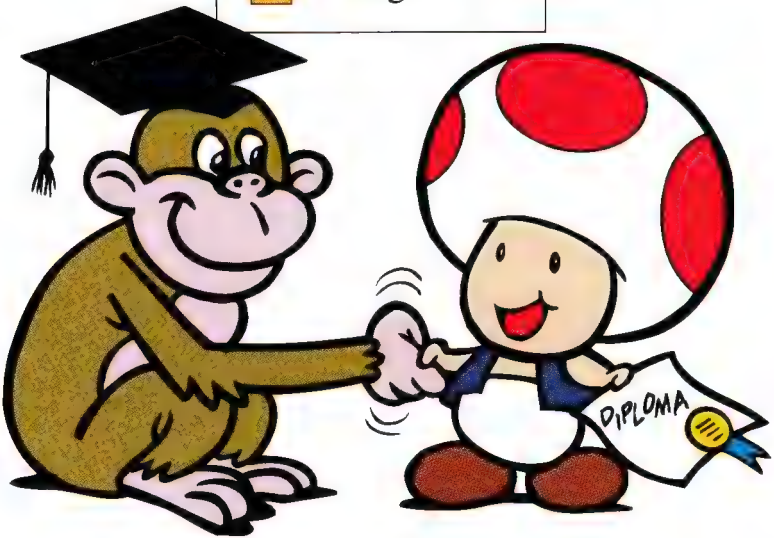
Which ape do scientists believe is the most intelligent?

WILD ANIMALS

1. Gorilla
2. Chimpanzee
3. Orangutan



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Chimpanzees

The chimpanzee is one of the most intelligent animals and is considered the animal most nearly like humans.
A chimp's gestures, attitudes, display of feelings like joy, fear, sadness, anger, and tenderness are very much like ours.

2 Scientists believe the chimpanzee is the most intelligent member of the ape family.

Photo © R. Konig / Jacana

Although very distrustful in their natural habitat, young chimps are easily raised and trained in captivity.

Chimpanzees are one of four kinds of ape; along with gorillas, orangutans, and gibbons. While other apes are quite intelligent, the chimp is considered the smartest. One measure of its intelligence is its ability to use tools and weapons. The chimp uses branches and rocks as weapons to oppose its enemy. It sticks twigs into termite holes to catch the insects to eat. And it uses leaves as sponges and saucers to collect water to drink!

Captive Audience

Because in many ways chimps are similar to humans, scientists often try to teach them human skills. Chimps have been taught to recall 32 different sounds, identify forms and colors, use sign language, and express themselves by painting pictures. But these abilities don't come naturally; the chimps had to spend hours practicing.

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Which are a lion's favorite prey?

WILD ANIMALS

1. Antelope, zebras, and gnus
2. Elephants, rhinos, and hippos
3. Monkeys, hyenas, and vultures

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Lion's Prey

The lion hunts many different species, including fish, birds, and mammals. The powerful cats seem to prefer antelope, zebra, and gnu, but will attack any unsuspecting animal when hungry.

1 **The lion's favorite prey are antelope, zebras, and gnus.**

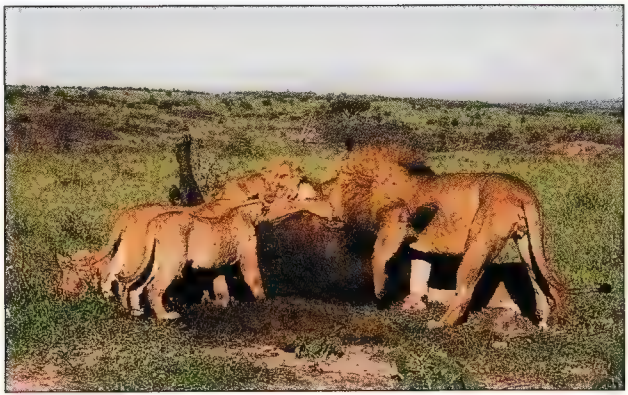

Photo © P. Cheuva / Explorer

The lion is a predator but not a prey—no other animal hunts it.

In general, lions attack the most abundant species in their territory. And they go after the easiest to catch—young or sick animals, or those that wander away from their herd. They rarely attack very large animals, such as hippos, rhinos, elephants, or adult giraffes, and hyenas aren't really on the menu. Like lions, hyenas are great predators.

A Big Meal

Lions also eat carrion—decaying flesh of dead animals. When they find an already-dead animal, the cats' rough tongues rake the carcass without leaving the tiniest bit of flesh behind. Most lions eat only every 3 to 4 days, but then they eat up to 75 pounds (34 kg) in one meal!

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Why do some lizards' tails break off?

WILD ANIMALS

1. Because they no longer like the pattern
2. Because they get a new one every spring
3. To help them escape from their enemies

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Lizard Tails

A number of lizard species can break off parts of their tails if they are seized by the enemy. This is the reptiles' way of defending themselves, and "ending" the fight!

3 **Some lizards' tails break off to help them escape from their enemies.**

Photo © R. Volot / Jacana

Nature has provided geckos, iguanas, and some other lizards with the ability to regenerate, or grow back, a lost tail part.

Connecting bones in a lizard's long tail include one easily broken area. Just a pinch on the tail by a predator triggers a reflex action by the lizard. It contracts the tail muscles to jerk at the break-off point, and the tail snaps off! Immediately, another muscle contracts to prevent bleeding. The missing tail portion will be replaced—a new part will grow in.

Lots of Lizards

There are over 3,000 lizard species. Like other reptiles, lizards live in tropical regions, but they also thrive in deserts and as far north as the Arctic Circle. Lizards are usually distinguishable from snakes because of their four feet, moveable eyelids, and fleshy tongues. Some even have flaps of stretchy skin between their front and back legs that help them glide from tree to tree. But some lizards are legless and look very much like snakes.

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Do flying fish really fly?

WILD ANIMALS

1 Yes, they have fins that help them fly above the water.

2 No, they just jump very high out of the water.

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Flying Fish

With a motion of its strong tail, a flying fish can throw itself out of the water. Once it's in the air, the fish glides above the waves by spreading its large fins, which act like wings. But the flying fish doesn't flap the fins like a bird flaps its wings. Instead, the flying fish simply soars.

1 **Yes, a flying fish's fins help it make short flights above the water.**

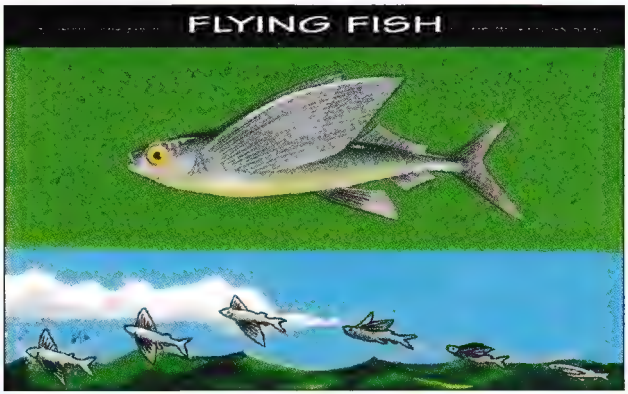

Illustration © Y Tabaré's

The flying fish can leap about in all directions, using its tail as a rudder to keep it on course.

There are over 50 species of flying fish. They live in warm seas all over the world. The California flying fish grows to a length of about 18 inches (46 cm). The sharp-nosed flying fish lives off both coasts of tropical America.

Flying fish eat all small prey in the ocean. They are light and swift, and can escape their enemies by rushing to the surface and leaping out. Body muscles and the strong tail, which acts like rudder, help the fish turn in flight. They often soar between 150-1,000 feet (46-305 m) before diving back into the water. But flying fish might find danger in the air as well as under the sea—marine birds hunt and capture the fish as they soar by!

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Which body part do ants use when building their nests?

WILD ANIMALS

1. Their teeth
2. Their mandibles
3. Their antennae

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Ants

An ant's mandibles, jaws that move from side to side instead of up and down, are used to grasp food, carry young, and fight enemies. They are also used for digging and cutting when building nests.

2 Ants use their mandibles when building nests.

Photo © Kunig / Jacana

Many ants build large mounds of twigs, soil, and pine needles over their underground nests.

Most ants build nests underground, carving tunnels and chambers out of the soil. Large black or brown carpenter ants build their nests in the trunks and branches of trees. They don't eat the wood, they only chew tunnels in it for nesting spaces. The ants hollow out rooms, then with a sticky liquid discharged by their glands, they secure the wood splinters and cement the walls.

Community Living

Wherever they build, ants work tirelessly until they have hollowed out common rooms, lofts, rooms for the queen, a nursery for the larva, hallways, and a breeding room. Airflow and climate is controlled by opening and closing partitions. Each ant has a job to do. Some tend the nursery, and some keep the nest clean by dumping any trash or garbage outside.

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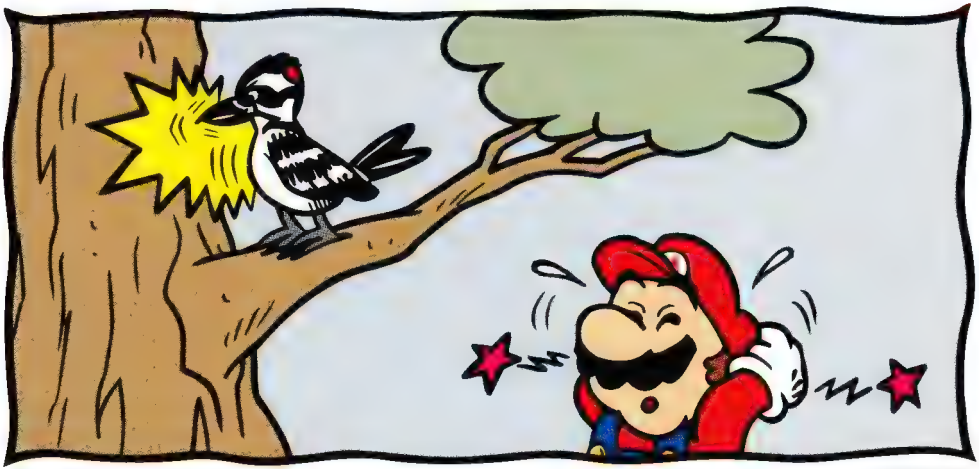
D3 054 14-16

What do woodpeckers eat?

WILD ANIMALS

1. Fruit and berries
2. Insects
3. Small mammals



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Woodpeckers

Woodpeckers are insectivores—they eat insects. The noisy birds live in trees where they can always find plenty of food living in and under the bark.

2 Woodpeckers feed on insects.

Photo © Masiowski / Visuals Unlimited

Woodpeckers dig holes in tree trunks to use as nests. They line the nests with wood chips.

A woodpecker is built for its way of life. Its strong feet and sharp claws allow the bird to climb trees and hang onto the bark. Two front-facing toes and two back-facing toes help a woodpecker climb without falling backwards. And its stiff tail feathers prop the bird against the tree trunk.

Tree Surgeons

With its long bill, a woodpecker drills holes in trees to find insects that live in or under the bark. Then the bird pulls out the prey using its long sticky tongue. Strong neck muscles move the woodpecker's head quickly back and forth as it drills. Head muscles act as shock absorbers to cushion the bird's skull from the force of the drilling.

Easier Meals

Some woodpeckers also catch insects in the air or on the ground. And many woodpeckers eat nuts and fruit as well as insects.

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Where does the puma live?

WILD ANIMALS

1. Only in South America
2. Only in Asia
3. In both North and South America

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Pumas

The puma, also called a mountain lion, cougar, catamount, or panther, is a member of the cat family. It lives in parts of Canada, the U.S., Mexico, and Central and South America.

3 The puma lives in both North and South America.

Photo © T. Walker / Jacana

The puma adapts well to life in the desert as well as the mountains. It's equally at home in extreme heat or snow.

Pumas are the second-largest of the cats found in North and South America. Only jaguars are larger. Pumas can grow to 5 feet (1.5 m) long—not counting their 2 to 3-foot (61-91-cm) -long tails. They have long legs and slender bodies, and are skilled jumpers and climbers.

Night Hunters

Pumas usually hunt at night, and may travel up to 50 miles (80 km) in search of prey— elk, deer, and rabbits. When food is scarce, the big cats even eat skunk or porcupine. Like most large predators, pumas kill weak, old, or sick animals. While stalking, the cats stay under cover, then leap out onto the prey. A puma can leap 20 feet (6 m) in a single bound!

Endangered

Because pumas have been known to prey on livestock, ranchers have traditionally hunted them. Sadly, that's why several species of puma are considered endangered today.

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What do hyenas eat?

WILD ANIMALS

1. Insects
2. Mainly dead or wounded animals
3. Plants

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Hyenas

Most often, hyenas are scavengers who feed on the remains of dead animals or prey on sick or wounded animals. They compete with other scavengers, like vultures and jackals, for their food.

2 Hyenas feed mainly on dead or wounded animals.

Photo © Arthus Bertrand / Explorer

A pack of hyenas competes with other scavengers, like vultures, for the carrion available on the grasslands.

Three species of hyenas live in Africa and southeast Asia: the brown, the striped, and the spotted or laughing hyena. Brown and striped hyenas are considered endangered. The most common, the spotted hyena, is famous for its weird howl, that sounds like a human's hysterical laugh. Hyenas have a distinctive shape—their shoulders are notably higher than their hind ends. These carnivores have powerful jaws and strong teeth that enable them to crack and eat even very large bones.

Hyena Habits

Although basically scavengers, hyenas also attack and kill live prey. After the sun goes down, they go in search of food, traveling alone or in packs. Guided by keen vision, a good sense of smell, and fine hearing, they find a meal in short order.

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How many horns does the snail have?

WILD ANIMALS

1 Two
2 Four
3 Six

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Snail

A snail is an air-breathing mollusk. It has a single spiral shell, eyes on stalks, and one foot.

2 A snail has four horns or feelers.

Photo © L. Bertrand / Explorer

A snail avoids exposure to the sun or to extreme cold. In the fall, it closes up its shell with a membrane and hibernates until spring.

A snail's head has four tentacles, or "horns." The lower, shorter two are the animal's "feelers," or organs of touch. The higher, longer two each have a black dot on the tip—they are the snail's eyes.

Unisex Snail

The snail has the reproducing ability of both male and female. So it can mate with any other snail of its species. It lays its eggs in a hole in the ground. There are thousands of species of snails on land, in the ocean, and in freshwater lakes and ponds. Each snail has a shell. It's made of the secretions from an underlying "mantle" of tissue. The shell houses the animal's internal organs and doubles as its shelter. A snail moves by crawling on its one flat, muscular foot. So the foot has something on which to contract and relax, the snail secretes a trail of shiny mucus that remains long after the snail has passed by. A snail feeds on shredded leaves, with the help of its long raspy tongue.

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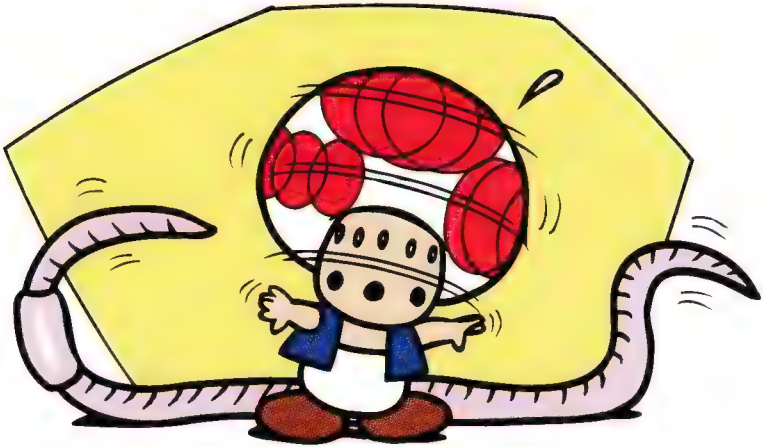
How long is the longest earthworm?

WILD ANIMALS

1. About 1 foot (30.5 cm)
2. About 4 feet (1.2 m)
3. About 11 feet (3.35 m)



©1995 Nintendo

Earthworm

Earthworm or night crawler is a name given to many worms worldwide. Found in most warm soil, earthworms range in size from 1/25 inch (1 mm) to 11 feet (3.35 m) long.

3 **The longest earthworm, in Australia, is about 11 feet (3.35 m) long.**

© C. Nardin / Explorer

The earthworm ventilates the soil while crawling through it.

Earthworms are often used as fishing bait, so some people call them angleworms. (Angling is a type of fishing.) They contribute to plant life by breaking down decaying matter in soil.

Earthworm Facts

The earthworm's legless, segmented, soft body is made like two tubes, one inside the other. The inner is the digestive tube, the outer is the body wall. The animal has no eyes or ears, but it does have a mouth and is sensitive to light, heat, and touch. It crawls by lengthening its front part, pushing down into the soil, then pulling its back end up. Setae, or tiny bristles, on the body help the worm grip the surface on which it's moving. Earthworms don't have lungs, they breathe through their skin as it touches little pockets of air in the soil. When it rains, the pockets fill with water, so the worm must come to the surface to breathe air and keep from drowning.

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How does a porcupine defend itself?

WILD ANIMALS

1. With its sharp teeth
2. With its sharp claws
3. With its sharp quills

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Porcupines

As a means of defense, when a porcupine comes in contact with an enemy, its quills detach and stick into the attacker.

3 **A porcupine defends itself with its sharp quills.**

© Fréderic / Jacana

Old World porcupines (pictured) are brown with very long black and white quills. New World porcupines have shorter quills.

There are two kinds of porcupine: Old World or eastern hemisphere porcupines have extremely long quills and don't climb trees; New World or western hemisphere porcupines have shorter quills and climb trees. Both are nocturnal plant-eaters. By day, they sleep in burrows; by night, they dig up and gnaw roots and tubers.

Self-Defense

To warn predators that come too close, a porcupine stamps its foot to make its quills vibrate. If that doesn't stop the attack, the porcupine lets its quills do the job. People used to think a porcupine could shoot its quills like arrows, but that isn't true. Long soft hairs and strong solid quills on its body detach easily and stick to a predator's paws or face. The tips of some quills have barbs, or backward pointing projections. These hook into the flesh of the predator and are difficult and very painful to remove.

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To which animal category does a whale belong?

WILD ANIMALS

1 Mammals

2 Fish

3 Mollusks

©1995 Nintendo

Whales

Although they live and eat in water, whales are not fish. They belong to the order of mammals called cetaceans or "large sea animals."

1 A whale is a mammal.

© Crept. Jacana

As whales travel underwater, they communicate through clicking sounds and "humming" melodies.

Whales are very large compared to other family members, like the dolphin and porpoise. The blue whale, 100 feet (30 m) long and weighing 220 tons (200 metric tons); is the largest animal that ever lived. As a mammal, a whale needs to breathe air, which it does through nostrils on its head. To find food, a whale dives for prey, often more than 3,280 feet (1,000 m). The whale locates prey by using sonar or sound echoes. A whale can hold its breath a long time—the sperm whale can stay underwater up to 2 hours!

Whales in Danger

Once whales were killed for food and to make cosmetics, fertilizer, glue, medicine, and oil. To protect them from extinction, there's a ban on killing some species and a limit on how many others can be caught each year.

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Which is a type of antelope?

WILD ANIMALS

1 Dik-dik

2 Mani-Mani

3 Yo-yo

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Antelopes

The African dik-dik is one of the smallest in the antelope family. The tiny animal, just 15 inches (39 cm) high at the shoulder, lives in densely wooded areas.

1 The African dik-dik is one of the smallest antelopes.

© T. Dressler / Explorer

A dik-dik is about the size of a jack-rabbit. The tiny antelope's colors help it blend into grassy, wooded areas where it lives.

The dik-dik is a very small antelope in a family with a wide range of sizes. The largest, the giant eland, is about 6.6 feet (2 m) tall at the shoulder. The royal antelope, probably the smallest hoofed animal, stands about 10 inches (25 cm) high at the shoulder.

Dik-dik Description

Dik-diks have tiny hoofs and short tails. The animals signal one another with high-pitched whistles and may have earned their name from the sound they make as they run away. Because they're small, dik-diks are very vulnerable to attack. So these plant-eaters hide where tall grass and small bushes can camouflage them as they graze. Dik-diks rarely travel in search of water, and can live several months on moisture from the dew on, and water in, the plants they eat.

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What's the difference between a leopard and a panther?

WILD ANIMALS

1. A leopard can run faster than a panther.
2. A panther can leap farther than a leopard.
3. Nothing, except the shades of their coats.

©1995 Nintendo

Leopards

Most leopards' coats are light tan with black spots, but those living in forests have darker coats. The black leopard's is so dark that its spots are hard to find—it looks all black and is often called a panther.

3 **The only difference between a leopard and a panther is the shades of their coats.**

© Dirk Heinrich / Spa Image

From high on a tree limb, the leopard can more easily spot prey.

The leopard, one of the largest members of the cat family, lives in Africa and Asia. An average adult leopard is 7.5 feet (2.3 m) long and weighs between 75-160 pounds (34-73 kg).

Food Habits

Meat-eating leopards prey on mammals like antelope, monkeys, sheep, and even large porcupines that have quills more than 1 foot (30 cm) long! The big cats are great climbers and spend a lot of time in trees. Amazingly strong, they can carry an 80-150 pound (36-68 kg) carcass up a tree and store it for a future meal!

Leopards in Danger

Once, leopards were hunted and their fur used to make coats. Now they're an endangered species and many nations have outlawed the buying and selling of leopard skins.

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Does a mole have good eyesight?

WILD ANIMALS

1. Yes, better than a human's.
2. No, it's almost blind.
3. No, it has no eyes.

©1995 Nintendo

Moles

A mole has keen senses of smell and touch, and even without external ears, it hears well. But it has very poor vision because it lives in darkness. Almost blind, its tiny eyes are shaded by overhanging fur or skin.

2 The mole, a burrowing mammal that lives underground, is almost blind.

© NHPA / Sunset

The mole's shovel-like front paws turn around to make digging easier.

A mole's body is adapted for life underground. With its cylindrical body, pointed nose, and short legs, the mole can move quickly through the long underground corridors it digs.

Making a Molehill

A mole's shovel-shaped front paws turn around so the animal can dig or rake through the soil. The mole rarely leaves its underground home—it doesn't need to. The insectivore feeds on worms and insects it finds underground. But sometimes, before dawn or twilight, a mole ventures out in search of a tasty frog or lizard.

Guest or Pest?

A cone-shaped mound of soil signifies that a mole lives below. As it burrows underground, the mole cuts off the roots of plants. So most gardeners and farmers don't appreciate having moles in their neighborhood!

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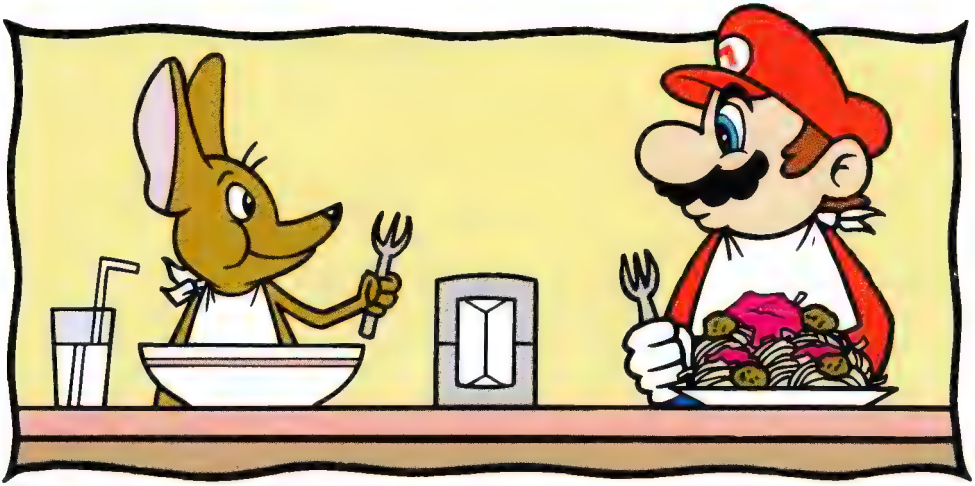
What does the long-eared bat eat?

WILD ANIMALS

1. Insects
2. The blood of animals
3. Turtles and fish



©1995 Nintendo

Long-eared Bat

This small bat's ears are really long. How long are they? They're so long the bat has to fold them under its wings when hanging upside down to rest!

1 **The long-eared bat, like most other bats, is an insectivore—it eats insects.**

© NHPA / Sunset

Bats can probably see as well as people can, but they can hear high-frequency sounds that humans can't.

There are 900 species of bats, the only flying mammals. They live everywhere in the world, except in Antarctica and the Arctic.

Bat Habits

The long-eared bat, like many other bats, hibernates in winter. When spring comes, the bat spends its days sleeping in hollow trees or under the edges of roofs, unless chased away by a cat or predatory bird. At night, the bat hunts, using echolocation—a method similar to radar. It constantly emits high-pitched squeaks in flight. If the sound waves hit even a tiny insect, they bounce back to the bat's supersensitive ears so the bat can catch its prey in mid-air. Bats eat lots of insects, but digest food faster than any other mammal, so they don't add extra weight while flying. Some fly 15 miles (24 km) per hour, but most bats fly only 5-8 miles (8-13 km) per hour, eating on the go.

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D3 054 20-05

Where do dragonflies lay their eggs?

WILD ANIMALS

1 Under the roofs of houses

2 In trees

3 In water

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Dragonflies

Dragonflies are flying insects with four large wings that glisten in the sunlight and compound eyes that may have up to 30,000 facets. Females lay their eggs in swamps and other damp places.

3 **Dragonflies deposit their eggs in water, sometimes inside the stem of a water plant.**

© Werbrung / Sipa Image

As it flies up to 60 miles (97 km) an hour, a dragonfly holds its six legs together under its body like a basket in which to catch insects.

A young dragonfly, or nymph, hatches in water and has no wings. The nymph lives in water for one to five years, breathing through gills and feeding on insects and small water animals, even young fish.

Growing and Changing

In a partial metamorphosis the nymph develops into an adult dragonfly by molting, or shedding its skin, about 12 times. When it's time for the final molt, the nymph climbs out of the water and onto a reed or rock. Then it sheds its skin for the last time, emerging as an adult that can fly. Today, the largest dragonflies have wingspans of 7 inches (18 cm), but fossils of ancient dragonflies show their wingspan was about 2.3 feet (70 cm). Adult dragonflies live only a few weeks to a few months.

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D3 054 21-15

Where do penguins live?

WILD ANIMALS

1 In the Arctic

2 In the Northern Hemisphere

3 In the Southern Hemisphere

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Penguins

Penguins live in regions of the Southern Hemisphere, including Antarctica and the lower coast of South America. Completely flightless, they are the most specialized of all marine birds.

3 Penguins live in the Southern Hemisphere.

© IFS / Sipa Icono

A male emperor penguin holds an egg between his feet and off the icy cold ground.

Like all birds, penguins have feathers and wings. But penguin feathers grow uniformly over their bodies rather than in narrow bands like other birds. And penguins don't flap their wings to fly through the air, they flap them to fly through the water.

Penguin Habits

Whether standing or moving upright on land, the 1-4 foot- (.3-1 m-) tall penguins appear awkward, but in the water they're speedy and graceful. In September they come ashore to court, mate, and raise their young. (They mate for life.) As they near shore, the birds leap from the water and land feet-first. In colonies of as many as 50,000, penguins build nests on rocky beaches. Penguin chicks hatch in December, the adults molt in February, and they all head for warmer water by the end of March.

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How can you recognize a proboscis monkey?

WILD ANIMALS

1. By its long trunklike nose
2. By its very long ears
3. By its webbed feet

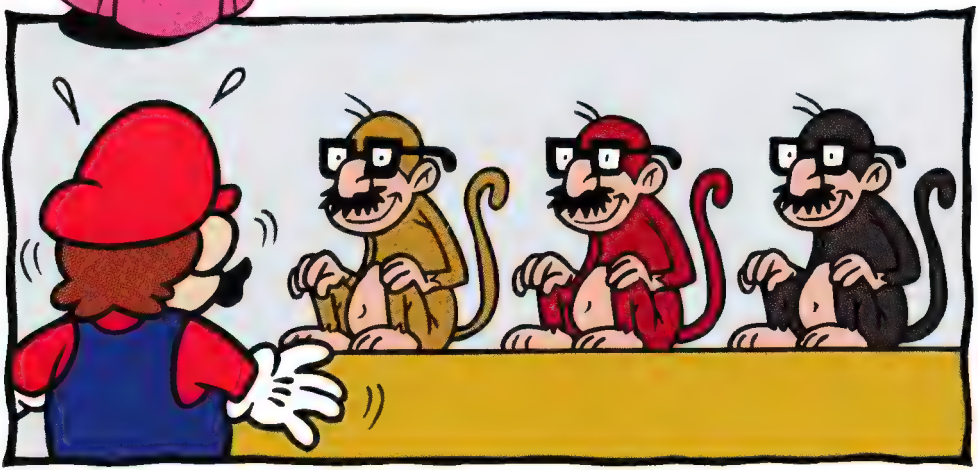

Illustration: Gary Fields

©1995 Nintendo

Proboscis Monkey

Proboscis means "long snout," and this monkey lives up to its name. The furry creature's nose isn't just long, it almost looks like an elephant's trunk!

1 **The proboscis monkey is easily recognizable by its long trunklike nose.**

© G. Lacz / Sunset

The proboscis's coat is brownish-yellow. Like most monkeys, its legs are slightly longer than its arms. Monkeys usually stand on two legs when threatening enemies or running.

The Pacific island of Borneo, north of Java near the South China Sea, is home to the proboscis monkey. It's an Old World monkey, those found only in Africa and Asia—New World monkeys live in Central and South America.

A Monkey's Life

The proboscis's body is 21-30 inches (53-76 cm) long, not including its tail. Old World monkeys can't grasp things with their tails, but their tails do help them balance when climbing trees. And tails add air resistance to slow monkeys down as they leap from branch to branch. The proboscis thrives in the tropical rain forest area of Borneo, eating just about anything it finds, including birds, eggs, insects, fruits, flowers, frogs, leaves, and nuts. The monkeys live in social groups to be able to defend themselves against their predators—big cats.

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Which are felines?

WILD ANIMALS

1. Goat, llama, camel
2. Orangutan, baboon, chimpanzee
3. Lion, puma, lynx

Illustration: Gary Fields

©1995 Nintendo

Felines

The lion, puma, tiger, lynx, and domestic cat are all felines. Although different in size, domestic cats and their wild relatives have a lot in common.

3 The lion, puma, and lynx are felines, members of the Felidae family

© G. Lacz / Sunset

The lion, like all felines, is an excellent hunter. It usually grabs its prey by the neck to bring it down, then quickly breaks the animal's neck.

All cats have slightly rounded heads, sturdy bodies, and short, strong jaws with 30 sharp teeth. These help the carnivores tear flesh from their prey.

Skilled Predators

Members of this family are accomplished hunters. Whether it's a tabby in search of a mouse or a lion in search of an antelope, cats can catch their prey by approaching them quickly and quietly, on padded feet. Or the cats may wait silently until their prey comes close, then suddenly leap out for the kill. Wild cats have another natural advantage: the colors of their coats and their markings help them blend into their environment. For example, the tawny lion often goes unnoticed in the tall dry tawny-colored grasses of Africa.

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Which is not a canine?

WILD ANIMALS

1. Cougar
2. Dingo
3. Coyote

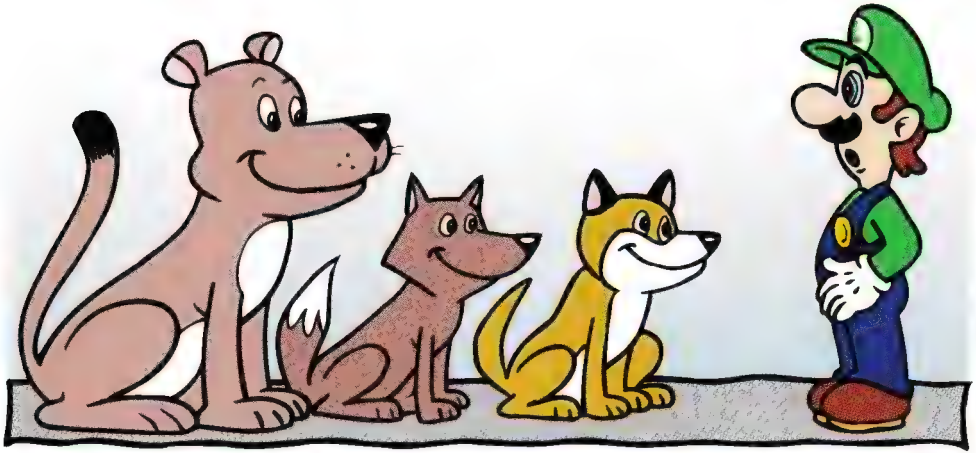

Illustration: Gary Fields

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Canines

Wolves, foxes, coyotes, and dingoes —wild dogs of Australia, are canines. Although different in some ways, Canidae family members have much in common.

1 **The cougar is a cat or feline, not a canine or member of the Canidae family.**

© G. Lacz / Sunset

The Australian dingo is considered such a nuisance that miles of fences were erected to keep the animals in one area, away from livestock.

Canines are carnivorous mammals that usually have long legs, bushy tails, and long muzzles. Many live in family groups or packs. Some packs average eight animals, but others may have more than twenty.

Hunting Tactics

Many canines hunt in packs. This gives them a double advantage: they can protect each other from enemies, and they can surround their prey and bring it down by attacking from all sides.

Wild Dogs

There are many different species of wild dog. Most are considered nuisances to ranchers and sheepherders whose livestock are attacked by the carnivores. For example, in the U.S. we have the coyote. Asia has the raccoon dog, South America has the bush dog and maned wolf, and Australia has the dingo.

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What does the Colorado beetle eat?

WILD ANIMALS

1 Apples
2 Cotton
3 Potatoes

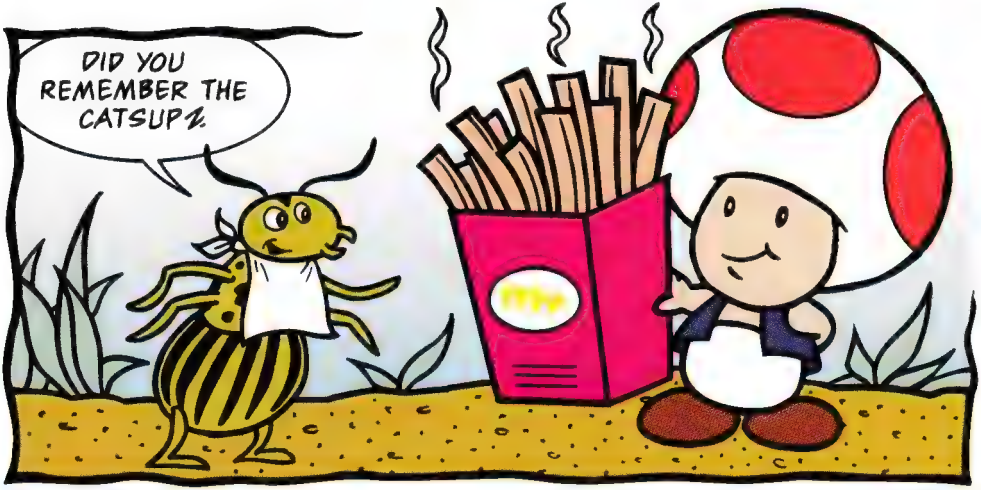

Illustration: Gary Fields

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Potato Bug

The Colorado beetle, or potato bug is a small, colorful yellow-and-black striped beetle. It major pest, threatening farmers' crops.

3 The Colorado beetle, or potato bug, eats potatoes.

© G. Lacz / Sunset

The potato bug lays its eggs on the underside of a potato plant leaf.

Originating in the state of Colorado, the bug was accidentally transported to Europe in 1922. There it multiplied until there were so many hungry beetles, they destroyed the European potato crop.

Life of a Potato Bug

The potato bug spends the winter hibernating underground. But as soon as the potato plants begin turning green in spring, the insects awaken and start eating the leaves. Each female lays 400-800 eggs on the undersides of the potato plant's leaves. After the larva hatch, they eat more potato plant to nourish them while they develop into adult beetles —this takes about 10 weeks. Once they're adults, the bugs eat the leaves and lay their eggs, and a whole new generation of potato-eaters begins. In one year, two or three generations of potato bugs may attack a farmer's crop and your future French fry and potato chip supply along with it!

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How many legs does a centipede have?

WILD ANIMALS

1. 10 to 12
2. 30 to over 350
3. 1,000 or more

Illustration: Gary Fields

©1995 Nintendo

Centipedes

These insects are in the biological class of arthropods, which have multi-segmented bodies, and many pairs of legs.

2 A centipede can have from 30 to over 350 legs.

© Gretchelek / Sunset

A centipede's body is divided into many segments, with antennae in front and pairs of legs from head to tail.

There are more than 2,000 types of centipedes ranging in length from about 1 inch (2.5 cm) to 11 inches (28 cm). The longer the centipede, the more legs it has. The longest has 177 pairs of legs or 354 individual feet. Centipedes can be found living on all continents.

Quick and Deadly

With so many feet, you'd expect centipedes to move quickly—and many do. Others slither slowly like worms. During the day, they rest under rocks, leaves and debris. At night, they scurry out to hunt for small insects, spiders and worms. Centipedes are carnivores. At the front end of the body, just behind the head, centipedes have a pair of venomous claws which they use to stun and kill their prey. Most centipedes, however, are harmless to humans.

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Are zebras born with stripes?

WILD ANIMALS

1 No, they appear after three months.

2 Yes, but they are not black and white.

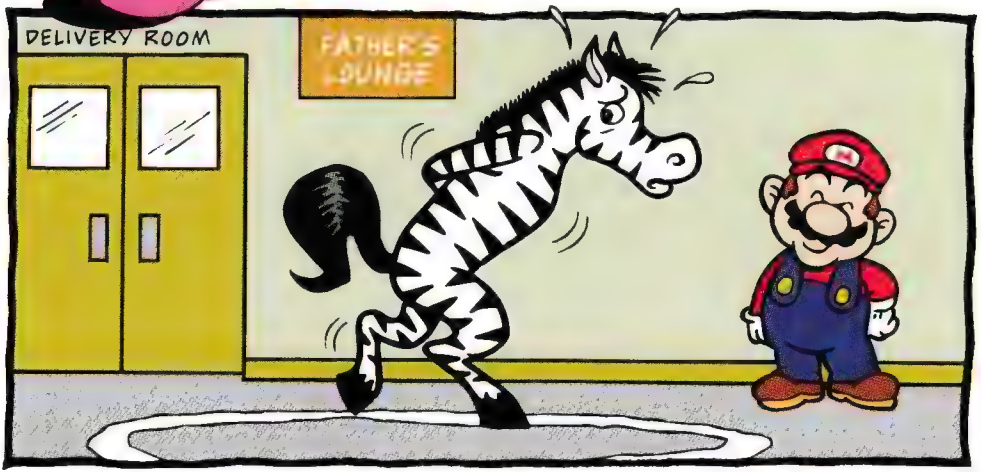

Illustration Gary Fields

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Zebras

A zebra's stripes become more distinct over time until adulthood, when they are black and white.

2 **Zebras are born with stripes that are brown and tan.**

© G. Lacz / Sunset

Zebras gallop like horses, reaching speeds of 37 miles per hour (60 kmph).

You can always recognize a zebra by its stripes—no two zebras have exactly the same pattern. Stripes distinguish zebras the way our fingerprints distinguish us. But the zebra's stripes have a second purpose. They camouflage the zebra when it's grazing in the tall grass of Africa so predators can't see it from a distance.

Different Species

There are three species of zebras. They live in different parts of Africa and have slight physical differences. The Grevy's zebra has large rounded ears and very narrow stripes, and lives in dry places like Kenya and the Sudan. Mountain zebras have long pointed ears and small hooves that help them walk on rocky ground. They live in South Africa. Burchell's zebras live on grassy plains in East Africa and have wide stripes.

Good Neighbors

Zebras graze peacefully with other animals—gnus, buffaloes, and ostriches. Ever alert to predators, such as lions, zebras act like alarm systems warning other animals of possible dangers.

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Which bird rides on a rhinoceros?

WILD ANIMALS

1. The pigeon
2. The oxpecker
3. The crane

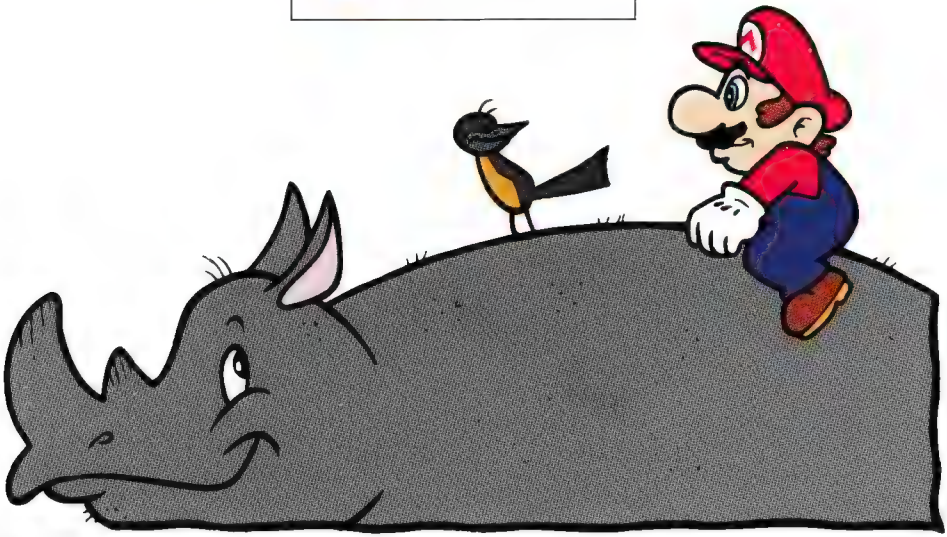

Illustration: Gary Fields

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Rhino Behavior

Tiny parasites cling to a rhino's thick skin, which might cause him suffering if not for oxpeckers. These red-beaked birds help rhinos by devouring the pests. This natural teamwork is called symbiosis.

2 **Oxpeckers ride on rhinoceroses and keep them free of parasites.**

© Animals Animals - Stitwell

Oxpeckers eat parasites that, literally, get under the rhino's skin.

Rhinos can be irritable, sometimes charging at intruders—or each other—with little provocation. A charging rhino is a scary sight. Rhinos can run surprisingly fast—28 miles (45 km) per hour. But even though the rhino looks ferocious, it doesn't eat meat. Rhinos are herbivores, they feed on plants. All rhinos are nearsighted, but they have keen senses of smell and hearing.

Man is the Enemy

Rhinos aren't afraid of predators like lions and tigers. The big cats' claws can't penetrate a rhino's thick skin. Sadly, a rhino's worst enemies are the people who kill them—illegally—just to cut off their horns. Some people believe the rhino's horn has magical powers, but that's just a superstition. In fact, the horn isn't a horn at all—it's not hard like an elephant's tusk or a moose's antlers—it is made of fibrous tissue and contains no bone.

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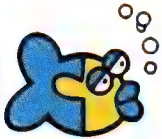
Which creatures are echinoderms?

WILD ANIMALS



1. Crabs and shrimp
2. Sea urchins, starfish and sea cucumbers
3. Mussels, oysters and clams

Illustration, Gary Fields

©1995 Nintendo

Echinoderms

The word echinoderm means spiny skin. It describes aquatic creatures with a protective outer layer of spines or projections.

2 **Sea urchins, starfish and sea cucumbers are echinoderms.**

© Animals Animals / Sunset

The sea cucumber got its name because its shape, and rows of bumpy pods, make it look like a cucumber.

Although they come in all shapes and sizes—from 3/4-inch (2 cm) starfish to 6-foot-long (2 m) sea cucumbers—all echinoderms have five symmetrical rows of pods or tube-like feet which help them move or cling to the ocean floor. Most live in shallow parts of the sea, usually at depths of about 330 feet (100 m), but some sea cucumbers prefer very deep parts of the ocean.

Lethal Liquid

To protect themselves from predators some types of sea urchin and sea cucumber secrete a poison that kills fish or drives them away. In some Pacific islands, fishermen use the sea cucumber poison, called holothurin, to kill the fish they catch. Though the fish can't stand the poison, it doesn't appear to be harmful to people. In fact, both sea urchin and sea cucumber are considered delicacies in Asia.

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Which birds are fowl?

WILD ANIMALS

1. Chicken, turkey and pheasant
2. Robin, sparrow and blue jay
3. Canary, parakeet and cockatiel

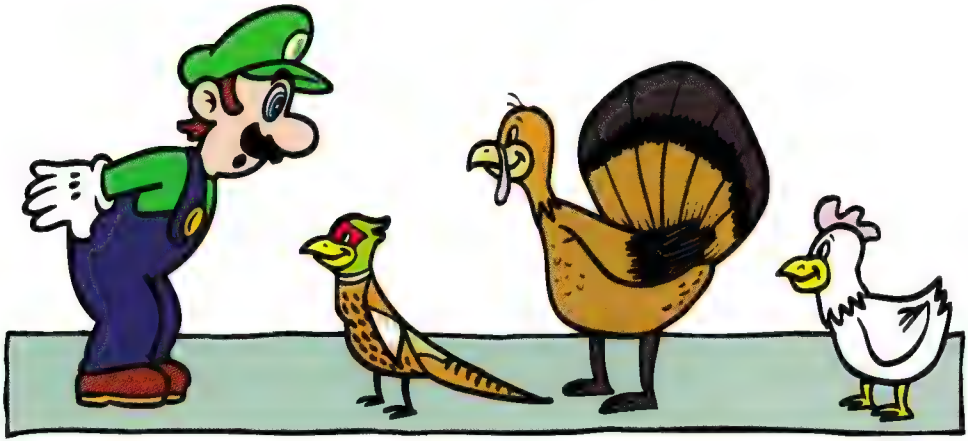

Illustration: Gary Fields

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Fowl

These birds belong to the biological order Galliformes, and they share several physical traits. Although capable of flying, Galliformes are most comfortable on the ground.

1 Chicken, turkey and pheasant are fowl.

© Keller / Sunset

Fowl belong to the biological order Galliformes. With short wings and strong legs they're suited for life on the ground.

Most birds are built for flight, with light bodies and long graceful wings. But fowl are not aerodynamic. Their bodies are heavy and their wings are short. They can fly short distances, but usually can't handle the long flights of migration to warmer winter climates. Chickens, turkeys and pheasants are built for life on the ground. Their legs are strong for running and their toes are long and sharp for scratching.

Poultry Farming

Chickens and turkeys are domesticated birds, raised for their meat, which is called poultry, eggs and feathers. The U.S. is the world's largest producer of poultry, much of which comes from southern states such as Arkansas, Georgia, and Alabama. On poultry farms chickens are bred for one of two purposes: broilers are bred for their meat; layers are bred to produce eggs. The average domestic hen lays 255 eggs per year.

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Which of these sea creatures is poisonous?

WILD ANIMALS

1. Starfish
2. Sea anemone
3. Coral

Illustration: Gary Fields

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Sea Anemones

These primitive sea creatures are related to jellyfish and hydras. They're beautiful, but dangerous.

Luckily, only two types of sea anemone, out of some 800 species, are lethal to humans.

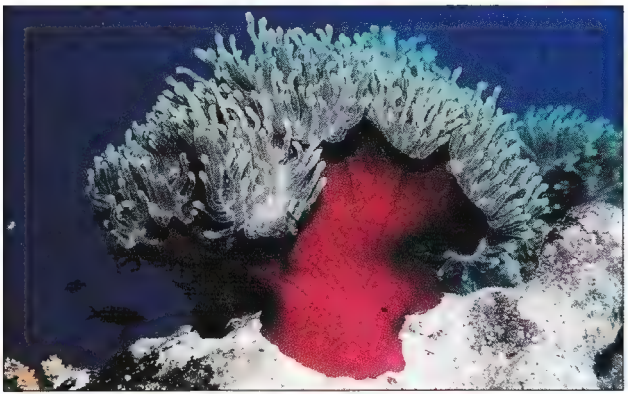
Stinging Cells

When the sea anemone is at rest, its tentacles retract into its body and it resembles a small sac. But when a tasty little fish or small crustacean swims by, the sea anemone springs into action. Its tentacles are deployed, like hundreds of waving fingers, catching the prey and holding it steady. The tentacles are dotted with stinging cells, called nematocysts, that work like little needles to inject the prey with poison.

Fishy Friendship

Sea anemones enjoy an unusual friendship with clown fish, bright orange fish with bold white stripes. Clown fish are immune to the sea anemone's poison. In fact, they live among the sea anemone's tentacles. The tentacles protect the clown fish from predators and, in turn, the clown fish chase away larger animals that prey on sea anemone.

2 The sea anemone is poisonous.



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Sea anemones use their tentacles to immobilize prey while they inject it with poison.

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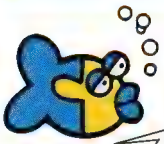
How can you tell an alligator from a crocodile?

WILD ANIMALS



1. The alligator is bigger.
2. An alligator's fourth teeth are hidden when its mouth is closed.
3. Alligators live on land, crocodiles in water.

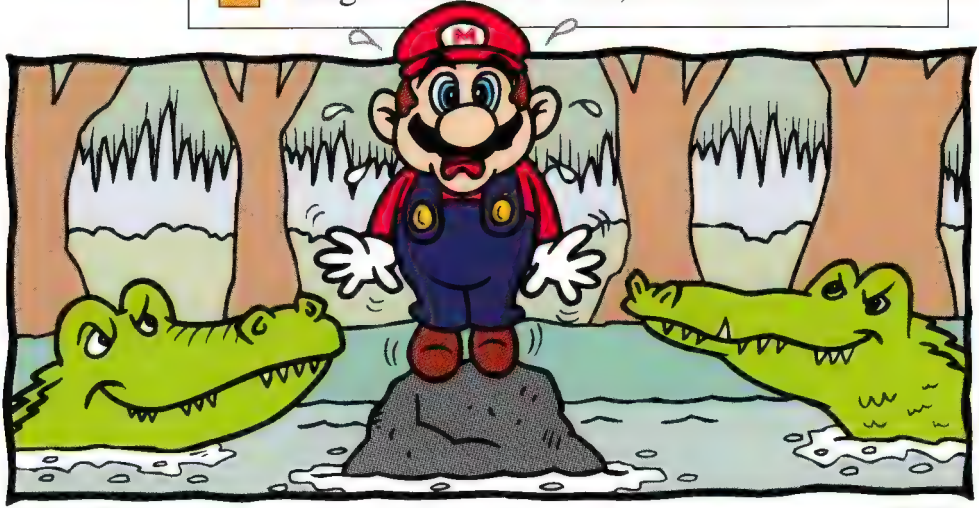


Illustration Gary Fields

©1995 Nintendo

Alligators

Alligators are distinct from crocodiles because their heads are usually larger and flatter, and their fourth teeth are hidden in little notches inside their mouths. A crocodile's fourth teeth are visible when its mouth is closed.

2 **When its mouth is closed, an alligator's fourth teeth are hidden.**

© Animals Animals / Sunset

In Florida, a North American alligator soaks up the sun along a riverbank.

There are two species of alligator. The Chinese alligator, which lives mainly in the Yangtze River in China, measures about 4.3 feet (1.3 m). The larger North American alligator, native to the swamps of Florida and Louisiana, measures about 13 feet (4 m). Alligators are cold-blooded reptiles and they reproduce by laying eggs.

Florida's Finest

As more people moved to Florida, much of the alligator's habitat, was replaced by human development. Alligators invaded the sewers, where they became a dangerous nuisance. Poachers killed them for their skins, which were made into leather goods like shoes and belts. Others just killed the alligators to be rid of them. Eventually, so many alligators were killed that the species became endangered. Today the alligator population has rebounded and the species is no longer endangered.

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Which is the North American brown bear?

WILD ANIMALS

1. Polar bear
2. Grizzly bear
3. Sun bear

Illustration. Gary Fields

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Brown Bears

Brown bears once roamed throughout cold mountainous regions of Europe and North America, but today the bear population has been reduced by hunters and poachers.

2 North American brown bears are known as grizzly bears.

© G. Lacz / Sunset

Brown bears live together in family groups. They're active through most of the year, but they hibernate in winter.

Most of the grizzly bears in North America live in the northern parts of Canada, though some can be found in the mountains of the northern U.S., from the Adirondacks in the East to the Rockies in the West. Kodiak bears, the largest of the brown bears, live mainly on Kodiak Island, off the coast of Alaska. Kodiak bears can grow to be 10 feet (3 m) tall and weigh more than 1,500 pounds (about 700 kg).

Furry Fishermen

There have been times when brown bears have attacked humans, usually when the bear has been injured or when a mother bear is protecting her cubs. However, brown bears usually don't attack people unless provoked. Bears do eat meat, and they're especially partial to fish. In fact, bears are skillful fishermen; wading into shallow water and catching salmon with their paws. They also snack on plants and berries found in the wooded areas of their mountain homes.

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How many teeth does a turtle have?

WILD ANIMALS

1 None
2 One
3 Four

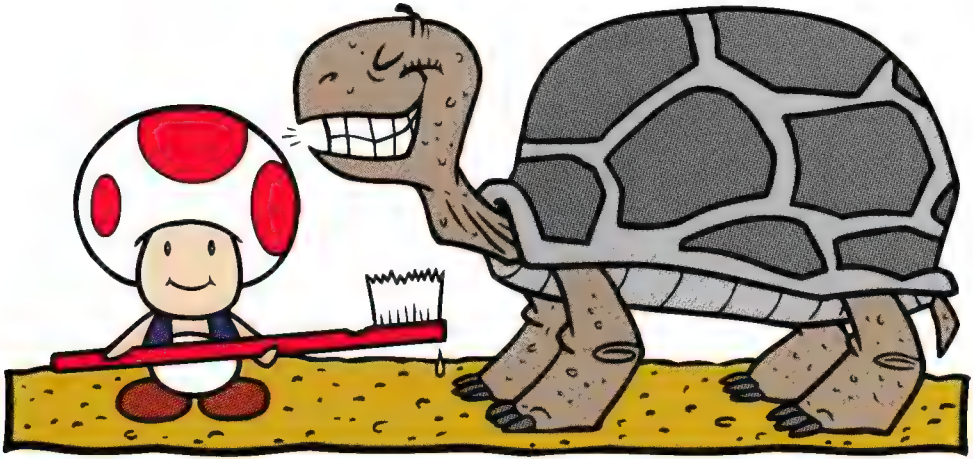

Illustration: Gary Fields

©1995 Nintendo

Turtles

Believe it or not, turtles have sharp beaks which they use to cut food. They catch prey in their powerful jaws. So although a turtle doesn't have teeth it still has a nasty bite.

1 Turtles do not have teeth.

© P. Doug / Sunset

Sea turtles live their entire lives in the water. They can grow as large as 8 feet (2.4 m) long and weigh 1,500 pounds (680 kg).

The first turtles appeared on Earth 185 million years ago. Zoologists estimate that turtles, on average, live longer than any other vertebrate animal. Some box turtles and tortoises live for 100 years! Turtles are reptiles, which means they're cold-blooded and they lay eggs. Turtles' shells protect them from predators. When in danger, a turtle pulls its head, legs, and tail into the shell.

All turtles lay their eggs on land. The female turtle uses her strong back legs to dig a hole and then buries the eggs underground to protect them. When the baby turtles hatch, they make their way alone back to the water.

Land and Sea

There are about 250 species of turtles. Freshwater turtles, like box turtles, painted turtles, and snapping turtles, live in ponds and marshes. Sea turtles live entirely in salt water, except when they come ashore to lay eggs. Tortoises are land turtles that live in deserts and dry climates.

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What's the difference between a rabbit and a hare?

WILD ANIMALS

1. Rabbits have longer ears.
2. Hares have longer ears.
3. There's no difference: a hare is a rabbit.

Illustration Gary Fields

©1995 Nintendo

Hares

Rabbits and hares look similar because they're related. Both belong to the same biological order—a classification of a group of related animals — Lagomorpha.

Hares are larger than rabbits and have longer ears. Newborn hares are furry, can see, and can hop a few hours after birth. Newborn rabbits have no fur, are blind, and can't move about on their own. Hares live above ground and rabbits below. But hares and rabbits look so much alike that some are actually mislabeled—a jack rabbit is a hare and the Belgian hare is really a rabbit!

2 One difference between rabbits and hares is that hares' ears are longer.

© Len Sirman

Hares are abundant on the plains and prairies of the Northern Hemisphere and Africa.

The Hare Facts

Hares have long powerful hind legs, large feet, and short tails. These plant-eaters are native to the plains of Asia, Africa, and North America, and have been imported to Australia, New Zealand, and South America. The brown coats of some species turn white in winter as camouflage in snow. Males of some European species have frantic boxing contests during the March mating season, leading to the expression "mad as a March hare."

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Which predator preys on baboons?

WILD ANIMALS

1. The leopard
2. The eagle
3. The aardvark

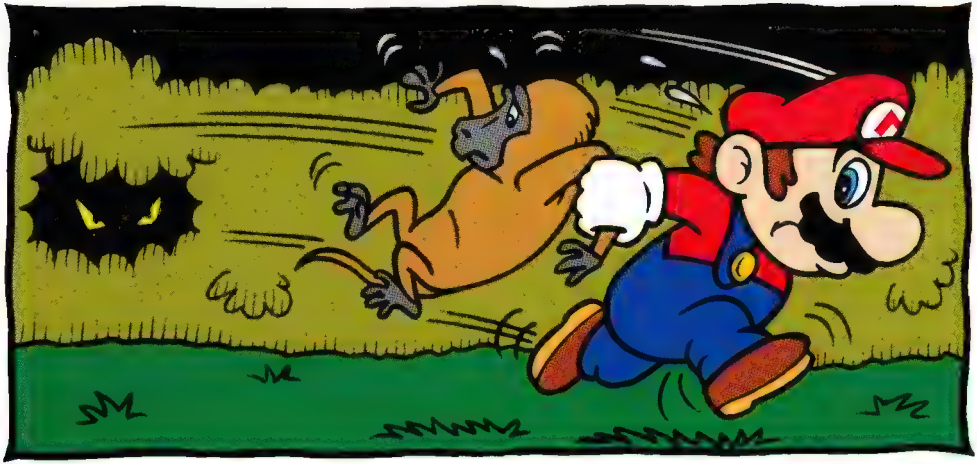

Illustration: Gary Fields

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Baboons

Baboons are large African monkeys with long, doglike muzzles and sharp teeth. The males are fierce fighters, but are no match for a hungry leopard.

1 **The leopard preys on baboons.**

© G. Lacz / Sunset

Baboons and other animals band together to protect themselves from their enemies.

A baboon's arms are just about as long as its legs. Some baboons have short stumpy tails and others have tails measuring more than 2 feet (61 cm) long. Male baboons weigh about 90 pounds (41 kg). Females are much smaller, weighing about 30 pounds (14 kg). Baboons eat roots, insects, eggs, fruits, grass, and leaves, carrying their food in cheek pouches.

Baboon Types

There are several baboon species in Africa and southwestern Arabia. Hamadryas live on the rocky hills and savannas of Egypt, Ethiopia, Arabia, and Sudan, in harems of one male and several females and their young. Many Hamadryas harems may join together to form a large group. Chacma baboons of southern Africa live in bands of 40-50, led by several large males. In both groups the males protect the band from enemies.

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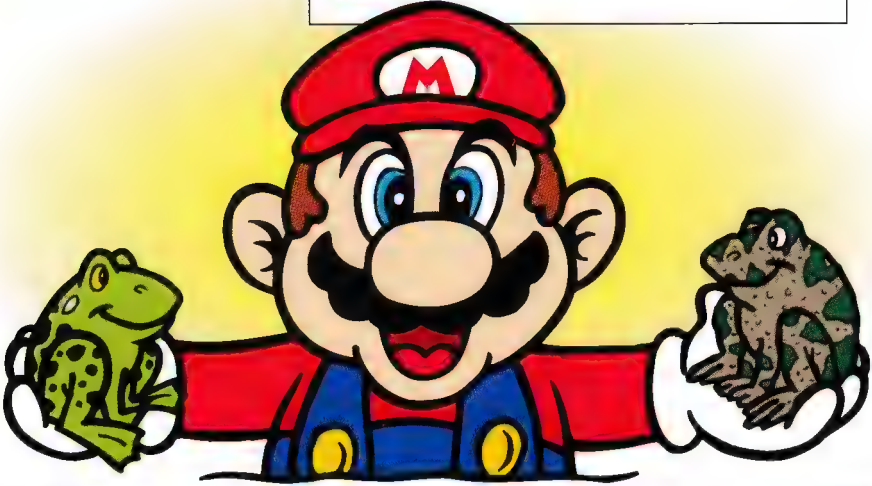
What's the difference between a frog and a toad?

WILD ANIMALS

1. Frogs are bigger.
2. Frogs live mostly in water; toads live mostly on land.
3. Toads live longer.



Illustration, Gary Fields

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Frogs

Toads resemble frogs because they're both amphibians. But toads live on land while most frogs live in water.

2 Toads usually live on land and frogs live mostly in water.

© G. Lacz / Sunset

Some frogs climb trees. They have tiny sticky pads on the ends of their fingers and toes to help them cling as they climb.

Frogs are cold-blooded—their temperatures match their environment. They breathe through lungs, but also can breathe through their skin. In cold regions they hibernate by burrowing in the bottom of muddy streams, breathing through their skin. Frogs' bulging eyes can see in most all directions. To close them, frogs pull their eyes into the sockets. Although frogs have no outer ears, they can hear. Skin behind their eyes is an eardrum that vibrates sound waves, sending signals to the hearing center in their brains.

Changing and Growing

Frogs hatch from eggs as tiny tadpoles that breathe through gills in their skin. As they develop, they grow legs and lose their tails and gills. Fully grown frogs shed their outer skin layer many times each year. They use their forelegs to pull the old skin off over their heads, then usually eat it.

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Where do crabs live?

WILD ANIMALS

1. In burrows
2. In the ocean
3. Inside oyster shells
4. All of the above

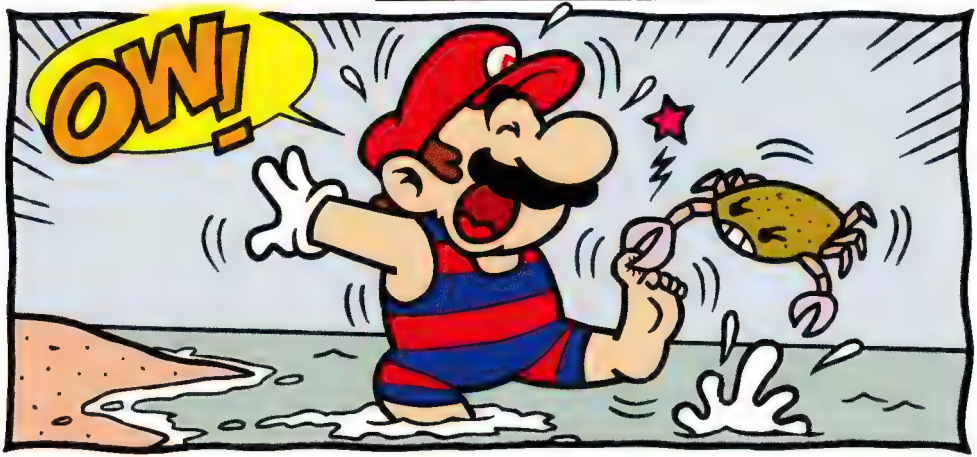

Illustration: Gary Fields

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Crabs

There are about 4,500 kinds of crabs. They live in many different environments, including oceans, land burrows, and the inside of a live oyster's shell.

4 Crabs live in many places, including the ocean, burrows, and inside oyster shells.

© S T E / Sunset

When some crabs shed their hard shells, they're defenseless until their new, larger shells harden. During that period they're called soft-shelled crabs.

Crabs come in different sizes, from the tiniest female pea crab that shares the sheltering shell of a live oyster to the giant Pacific Ocean spider crab, with its leg span of about 12.5 feet (3.8 m). The fiddler crab burrows in the banks of salty tidal streams. Other crabs live in fresh water or in burrows several miles (km) from the shore. The pine crab makes its home in water that collects at the bottom of bromeliad plants growing on tropical trees. Rock crabs burrowing on rocky seashores and ghost crabs burrowing in sand both seem to disappear as they move across a beach.

Adaptable Crabs

Body parts differ in crab species, depending on their uses. For example, a hermit crab lives in an empty sea shell, closing it tightly by using one claw as a door. And some crabs are swimmers, so they have paddles on their last pair of legs.

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Do all spiders spin webs?

WILD ANIMALS

1. Yes, they do.
2. No, they don't.
3. No one knows for sure.

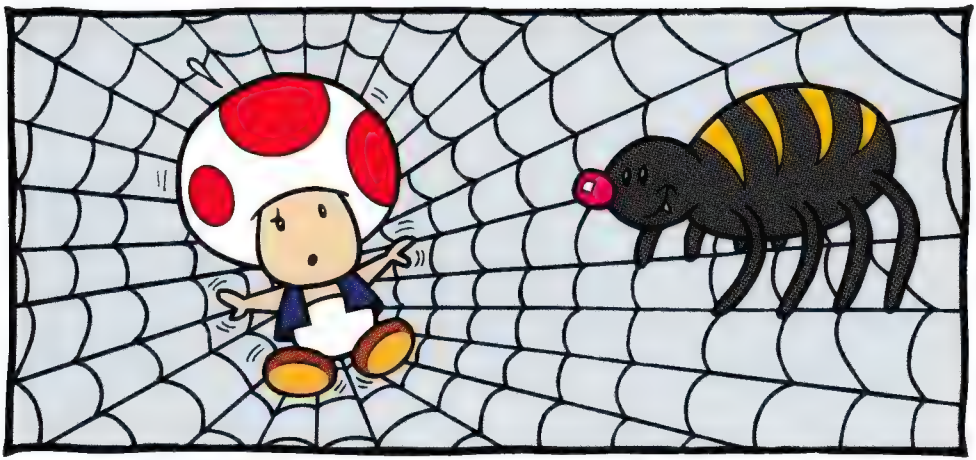

Illustration Gary Fields

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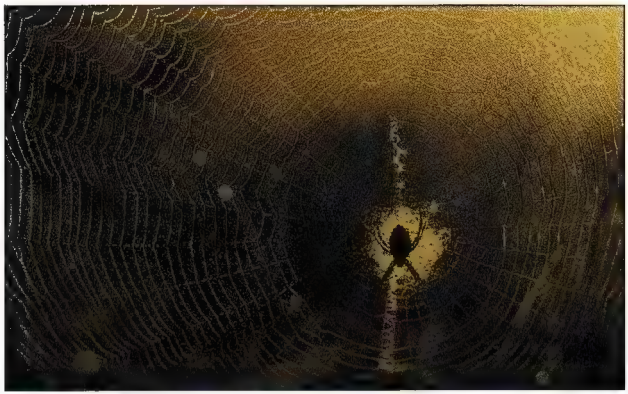
Spider Webs

There are 30,000 known species of spiders, including web-spinners and hunters that do not spin webs.

2 No, all spiders spin silk but not all spiders spin webs.



© Cavagnaro / Sunset

Spider silk is the strongest fiber in the world.

All spiders spin silk, but not all spin webs. For instance a bolas spider spins a single line with a sticky glob of silk at the end. If an insect flies by, the spider swings the line, like a cowboy and ropes in the insect.

Silk Spinners

A spider's silk is protein formed in silk glands, located in the abdomen. The glands produce different kinds of silk. Some is secreted as liquid that dries. Other glands secrete a sticky silk that remains sticky. Using different spinnerets that spin silk, a spider can combine silk from different glands to make very thin threads or thick bands. Some spiders create a thread that looks like a beaded necklace by pulling out a dry thread, heavily coated with sticky silk, and letting go with a snap. The vibrations cause the liquid to form tiny beads along the thread. All spiders spin a silk thread behind them, called a dragline or lifeline to help them escape danger.

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What do spiders eat?

WILD ANIMALS

1. Insects, frogs, and mice
2. Only insects
3. Only mice

Illustration: Gary Fields

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Spiders: Food

Different kinds of spiders eat different kinds of foods. Water spiders eat insects and small frogs, and some spiders have been known to eat small mice. There are even spiders, called pirate spiders, that eat other spiders!

1 **Spiders eat a variety of foods, including insects, frogs, and mice.**

© NHPA / Sunset

Web-spinners usually wrap prey and store them for later meals.

Many people are afraid of spiders, but only a few arachnids are poisonous to people. In fact most spiders are helpful to people—they kill insect pests. Spiders capture and eat the grasshoppers and locusts that, if not killed, could destroy farm crops. And spiders get rid of flies and mosquitoes which carry diseases that affect humans.

Spider Digestion

Spiders can't chew, so any nourishment they take must be in liquid form. To help with this, each spider is equipped with a small, strawlike tube for sucking juices from its prey. The spider can only eat a prey's solid tissues after predigesting them. To do this, the spider spits digestive juices onto the captured prey's tissue, causing it to break down into a liquid.

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Why does the blue fly lay its eggs on meat?

WILD ANIMALS

1. To use it as camouflage
2. To be a nuisance
3. To supply the meat-eating larva with food

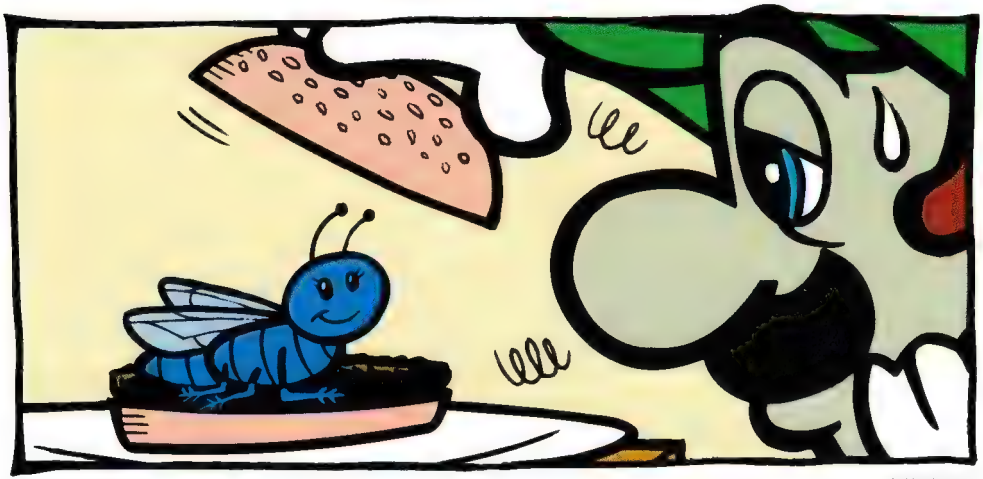

Illustration: Gary Fields

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Flies

There are approximately 100,000 species of flies. Some lay their eggs on decaying flesh, like the areas around wounds on an animal. If the animal is severely infested with fly eggs, it may die.

3 **The blue fly lays its eggs on meat so its carnivorous larva will have food when they hatch.**

© Goetzfeluck / Sunset

Houseflies leave their germs on everything they touch. That includes you.

Among the fastest flying insects, the fly's annoying buzz is really the sound of its wings beating—the average house fly's wings beat 200 times per second. It's tough to catch a fly because it soars at an average speed of 4.5 miles (7.2 km) per hour.

Bearers of Ill Tidings

Disease-carrying flies live throughout the world. They carry germs in their bodies, in the hair on their bodies, and on the tips of their mouthparts. They land on things with strong odors, like garbage and manure, where they pick up more germs. Then, when they land on or bite a person, they leave some of the germs behind. In this way, some flies transmit germs that cause serious diseases such as malaria, sleeping sickness, and dysentery.

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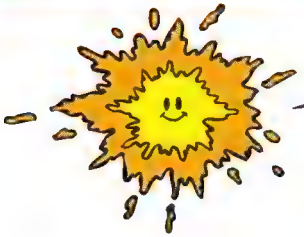
What is a mite?

WILD ANIMALS



1. A small eight-legged arachnid
2. A small six-legged insect
3. A small four-legged crab

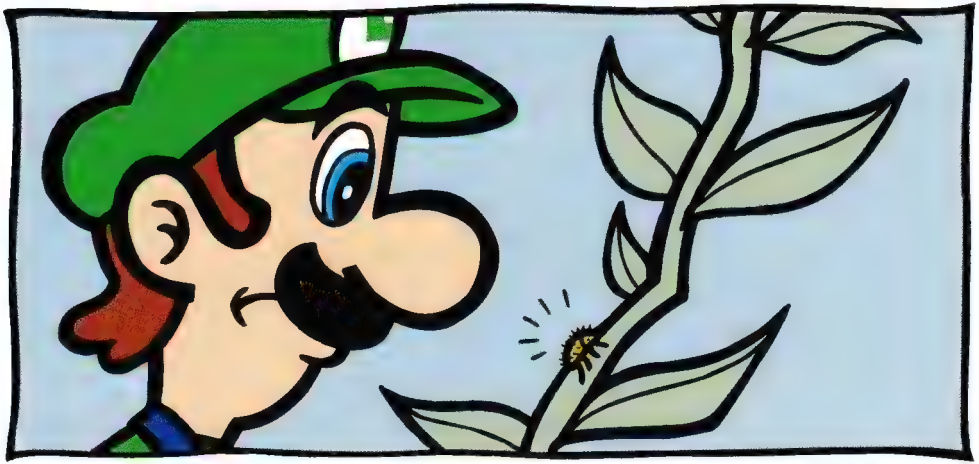


Illustration: Gary Fields

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Mites

Mites, small animals related to spiders, are parasites that live off of other living things.

1 A mite is a small eight-legged arachnid.

© NHPA / Sunset

Like their relatives, the ticks, mites can burrow into skin. Some of the tiniest mites are those found on mattresses and rugs.

Some mites live on land, some live on water, and some live on mammals, including people. Many mites are too small to see without a microscope.

Mite Matters

An adult mite normally has a saclike body with a small dividing line between its abdomen and thorax. It has four pair of legs and a mouth with piercing and grasping organs. A mite's digestive system starts with its sucking beak. At least part its life is spent as a parasite. It sucks blood from animals and juices from plants, and eats cell tissues from mammals. Mites show up just about everywhere. Some eat feathers, cheese, flour, cereal, medicines, or other stored products. And some burrow into people's or animals' skin, causing the skin to break out and itch. Chiggers are mites that bother people, and so are the wormlike hair mites that burrow into hair follicles, like on your eyelashes and eyebrows.

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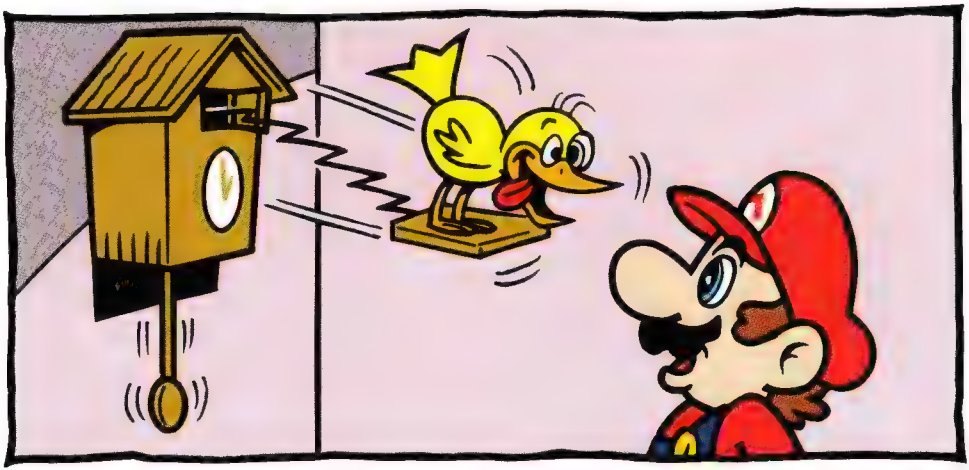
What is a cuckoo?

WILD ANIMALS

1. A tropical tree
2. A type of canoe
3. A crafty bird



Illustration, Gary Fields

©1995 Nintendo

Cuckoo

The cuckoo is named after the two-note song the male bird sings. In European countries it is said to announce the arrival of spring.

3 The cuckoo is a crafty bird.

© NHPA / Sunset

When the "foster" parents are a small species, feeding their adopted cuckoo can be a lot of work.

Cuckoos are rather large birds found in Europe, Asia, and America. There are 47 species of cuckoos, all of which share one specific characteristic: They lay their eggs in the nests of other birds.

Bully Birds

When the baby cuckoos are born, the "foster" parents instinctively feed them. The real cuckoo parents don't have to take care of their young. Because they take advantage of other birds without doing anything for them in return, cuckoos are called parasite birds. Some baby cuckoos will push the other eggs or babies out of the nest to make sure there is no competition for food and attention. Other cuckoos look like certain kinds of bird-eating hawks so they can bully their way into any nest they choose. Yet a third kind of cuckoo lays eggs in the nests of birds whose eggs look the same as theirs. Cuckoos mostly eat insects, spiders, centipedes, and worms.

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Why do jackals have a bad reputation?

WILD ANIMALS

1. Because the mother deserts her young
2. Because they dig around in trash looking for food and eat dead animals
3. Because they beat up smaller animals

Illustration Gary Fields

©1995 Nintendo

Jackal

Jackals are very closely related to the dog and wolf family. They are a little smaller and lighter in weight than wolves.

2 **Jackals have a bad reputation because they dig around in trash looking for food and eat dead animals.**

© MC Donald / Sunset

From the side the jackal could be mistaken for a large fox. Occasionally jackals gather in groups to go hunting.

There are three species of jackals. The side-striped jackal and the black-backed jackal are found in Africa and the golden or Indian jackal is found in Africa as well as in India and southeastern Europe.

We Should be Grateful

Jackals are hunters and scavengers. They eat sick and dead animals, carrion, and garbage. Although this menu may not sound very good to us, we should be thankful that jackals do these jobs. Jackals gobble up the debris and waste where germs and disease-carrying insects like to breed.

Jackals also eat insects, lizards, frogs, and mice. Surprisingly enough, they eat fruit too, but since they can't climb trees, they take whatever has fallen to the ground.

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Is the marine iguana the only lizard that can adapt to marine life?

WILD ANIMALS

1 Yes

2 No

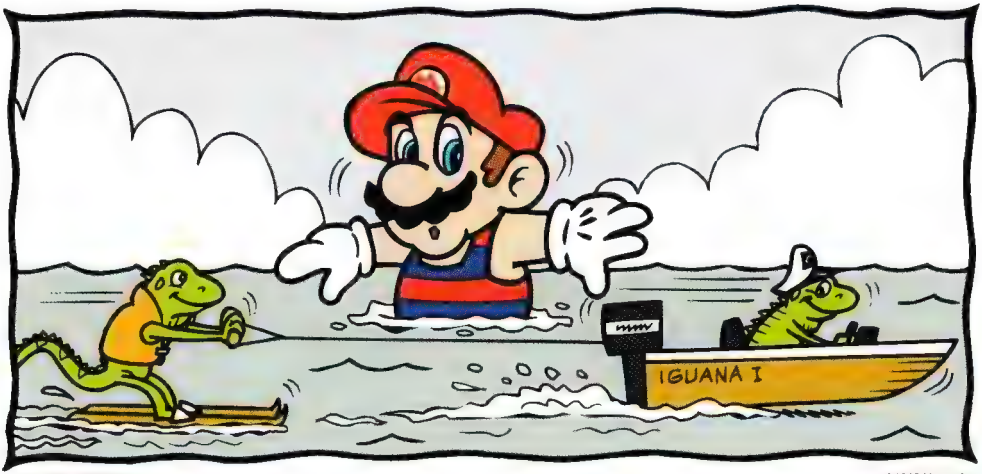

Illustration Gary Fields

©1995 Nintendo

The Marine Iguana

The marine iguana is a large black, or red and black, lizard that lives in the Galápagos Islands located off the northwestern coast of South America.

1 **Yes, the marine iguana is the only known lizard that can adapt to marine life.**

© S.T.F. / Sunset

Marine iguanas look ferocious, a little like dragons, but they are quite harmless.

There are approximately 13 species of iguana of which only one, the marine iguana, is capable of swimming for long periods of time. Iguanas are part of the lizard family.

These big lizards are also herbivores; they feed on plants. Marine Iguanas spend their time swimming underwater to nibble on seaweed then climbing onto the warm rocks to bask in the sun and digest their food.

Other Iguanas

The green iguana, which also lives in the Galápagos Islands as well as in the tropical forests of Central and South America, can grow to be about 6 feet long. Its pale green color serves as camouflage and allows it to hide effectively among green leafy branches. Green iguanas are herbivores. They eat fruit, flowers, young branch shoots, and leaves. Green iguanas are good climbers and spend a lot of time in trees.

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How much does an elephant eat each day?

WILD ANIMALS

1. 100-200 lbs. (45-90 kg) of vegetation per day
2. 200-300 lbs. (90-135 kg) of vegetation per day
3. Over 400 lbs. (180 kg) of vegetation per day

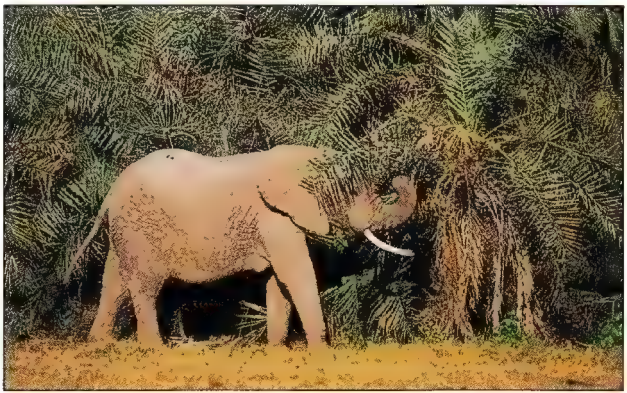
Illustration Gary Fields

©1995 Nintendo

Elephants

Elephants are the largest living animal on earth. It is no wonder they have big appetites!

3 **An elephant can eat up to almost 500 pounds (225 kg) of vegetation per day.**



© G Lacz / Sunset

Elephants can also drink over 100 quarts (95 l) of water a day.

There are two types of elephants: the Indian and the larger African elephants which can weigh up to 8.5 tons (7.7 metric tons). An elephant's menu does not lack variety. These enormous animals eat grass, leaves, young tree branches, and fruit from over 100 kinds of plants.

Big Eaters

They can uproot whole trees with their tusks and pull off the leaves, branches, and strips of bark with their trunks. You would think that this wouldn't leave much for the other animals, but elephants also produce excrement which is excellent fertilizer. This encourages new plants to grow. Elephants don't get stomach aches from eating tree branches and bark because they have a special acid in their stomachs which helps to absorb the cellulose fibers.

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What is an elephant trunk?

WILD ANIMALS

1. A genetic mutation
2. A piece of luggage
3. An extension of the nose and upper lip

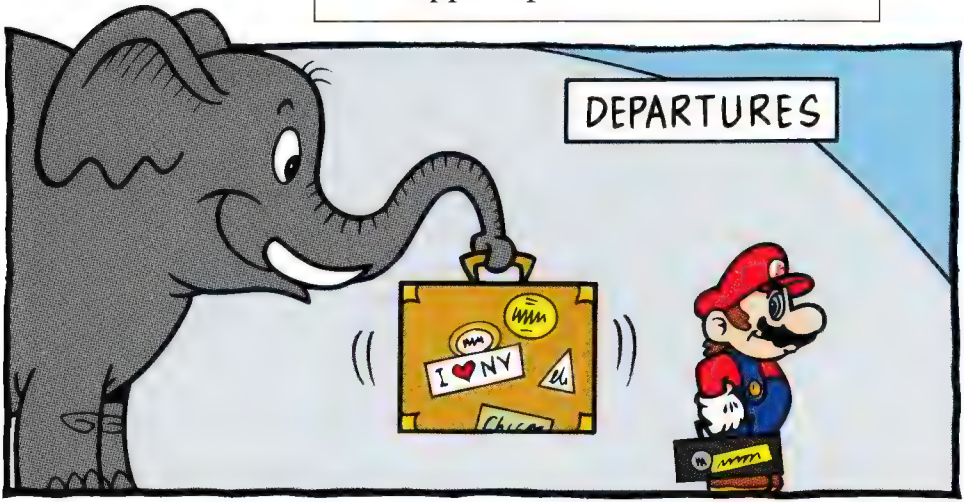


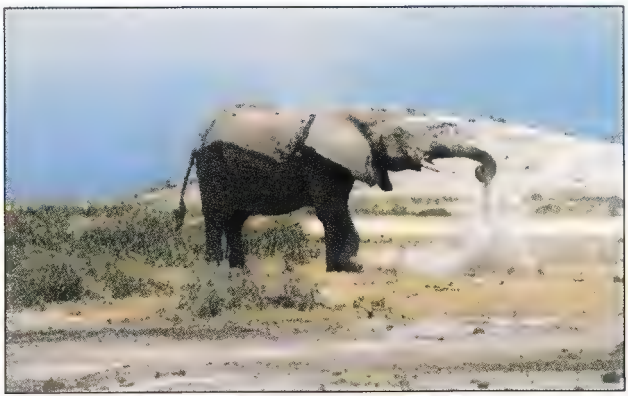
Illustration Gary Fields

©1995 Nintendo

The Elephant Trunk

Lip, finger, hand, and arm all in one! With its trunk an elephant can touch, grab, hold, smell, and drink, among other things.

3 An elephant trunk is an extension of the nose and upper lip.



© G. Lacz / Sunset

Elephants use their trunks when foraging for food.

The elephant's trunk is a long flexible snout with nostrils at the end. The tip of the trunk has finger-like projections which make it possible for the elephant to pick up small objects.

All Muscle

The trunk is made up of many muscles, but no cartilage. This allows the elephant to move its trunk all around, and stretch or retract it at will.

Because an elephant is unable to lower its head to the ground, the trunk makes it possible to grab food and bring it up to their mouths, or suck up water as needed. Elephants can also give themselves (or you) a shower. Mother elephants use their trunks to pet and calm their babies.

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At what time of day does a cheetah hunt?

WILD ANIMALS

1. Midnight
2. Early morning and late afternoon
3. Noon

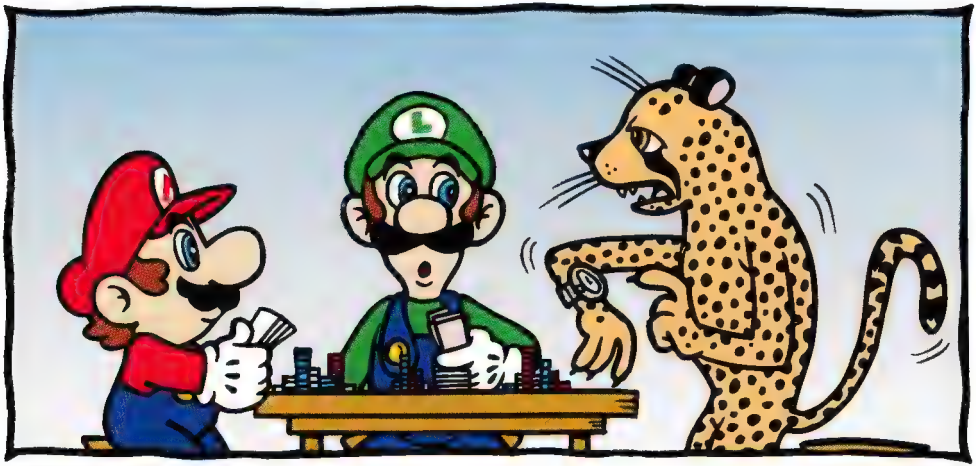

Illustration: Gary Fields

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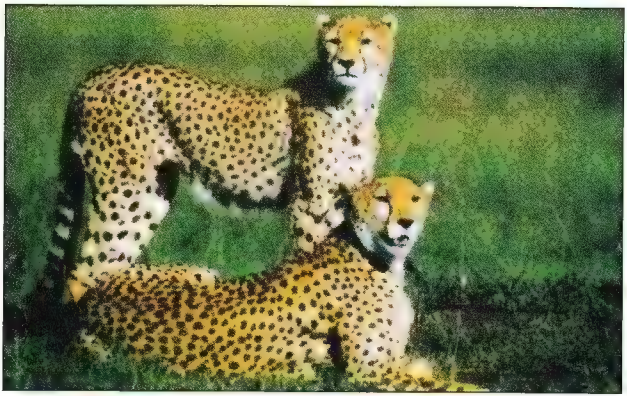
Cheetah

Cheetahs live in Africa, southwest Asia, and India where they are an endangered species. These slim, long-legged animals are also called hunting leopards.

2 **The cheetah hunts during the early morning hours and late in the afternoon.**



© Len Stirman

Brother and sister cheetahs live together until the sister finds a mate. The brother then goes off on his own.

In the wild, the cheetah lives in bush and forest areas. It is agile and can climb trees as well as jump far and high. The cheetah is the fastest animal on earth over short distances, moving as fast as 70 miles (110 km) an hour. But the cheetah gets tired quickly and is unable to run long distances.

The Hunter

The cheetah hunts alone or in small groups, usually in the early morning or late afternoon. First it carefully stalks its prey, then sprints to reach it. By doing this cheetahs are able to catch some of the swifter animals such as hares and antelopes.

The cheetah has a sandy yellow and white coat covered with black spots. It stands about 3 feet tall (90 cm) and weighs an average of a little over 100 pounds.

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What is the name of the white-faced owl?

WILD ANIMALS

1. Eagle owl
2. Barn owl
3. Pygmy owl

Illustration: Gary Fields

©1995 Nintendo

Barn Owls

Barn owls got their name because they live in places like barns, ruins, and clock towers. They have white heart-shaped faces, long legs, and small eyes.

2 The white-faced owl is a Barn owl.

© G. Lacz / Sunset

Because of its unusual face, people in the old days were scared of owls and believed they brought bad luck and predicted death.

There are approximately 120 species of owl living everywhere in the world except for the Antarctica. Some owls are tiny, measuring only 5 or 6 inches (13-15 cm) tall while others, such as the Eagle owl, grow to be over 2 feet (60 cm) tall.

Night Hunters

Owls are nocturnal birds of prey. This mean they hunt for food at night and sleep during the day. Thanks to their long flight feathers with downy tips, owls hardly make any noise when they fly. This makes it easier for them to attack their unsuspecting prey. Owls feed on insects, small birds, and small mammals.

The owl's big round eyes are positioned right on the front of its face, giving it a kind of binocular vision. Besides having excellent eyesight, owls also have very good hearing.

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What bird has a beak with a built-in pouch?

WILD ANIMALS

1 Pelican

2 Hummingbird

3 Turkey

Illustration: Gary Fields

©1995 Nintendo

Pelican

The pelican is a large bird with a long bill. An expandable pouch, which holds more than the pelican's stomach—about 3 gallons (11 l) when full—is attached to the bird's lower mandible, or jaw.

1 **The pelican has a beak with a built-in pouch.**

© P. Dumas / Sipa Press

Surprisingly the big-mouthed pelicans are silent except for an occasional low grunt.

The pelican is among the largest birds on Earth. Some pelicans reach lengths of 70 inches (180 cm) and weigh up to 30 pounds (14 kg). They have a wing span as wide as 9 feet (2.7 m) and dive from as high as 60 feet (8 m) in the air to catch their prey. Thanks to several air sacs distributed over their bodies, pelicans float easily on water. Their large, strong webbed feet make excellent paddles and propel them on and under water quickly.

Social Birds

Pelicans are social birds—they live together in colonies. Aloft in groups these wonderful flyers perform delightful air ballets. When flying level they keep their heads back on their shoulders and their bills rest on their folded necks. The strong, slow, methodical flapping of their wings propels them smoothly through the air.

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What is a hyacinth macaw?

WILD ANIMALS

1. A close relative of the penguin
2. The largest member of the parrot family
3. A Spanish chicken

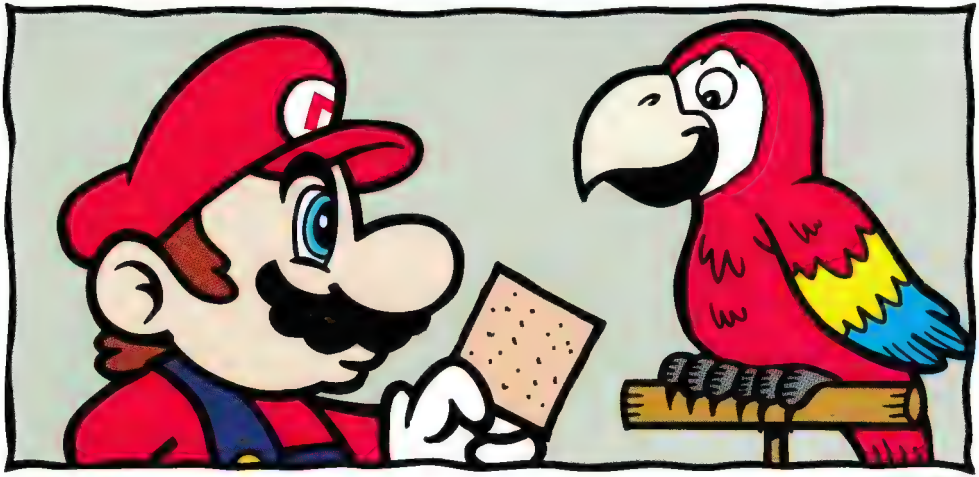

Illustration: Gary Fields

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Parrots

Birds in the parrot family can be found in North and South America, Australia, Asia, and Africa. They live in the mountains, in tropical rain forests, and even in cities!

2 The hyacinth macaw is the largest member of the parrot family.

© G. Lacz / Sunset

The ara macaw is among the most colorful parrots.

The hyacinth macaw of Brazil is the largest bird in the parrot family, measuring up to three feet long. Parrots like the hyacinth macaw have pointed wings and long tails of brilliant blue, red, yellow, or green feathers. The most common color is green, for camouflage in the forest.

The Parrot Family

Parrots are one of the most colorful and one of the most endangered species on Earth today. There are a little over 300 species left and most of them live in the warm tropical forests of Australia and South America. Parrots are known for their short, curved beaks, large heads, and short feet and neck. A parrot uses its four toes—two pointing forward and two pointing backward—and strong beak for climbing and for grasping the seeds and fruit that make up its diet. Intelligent and gregarious, parrots gather in flocks. All have loud, often raucous calls, and some species are known for imitating sounds they hear.

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What is a finch?

WILD ANIMALS

1. A wild cat
2. An African tree frog
3. A little bird

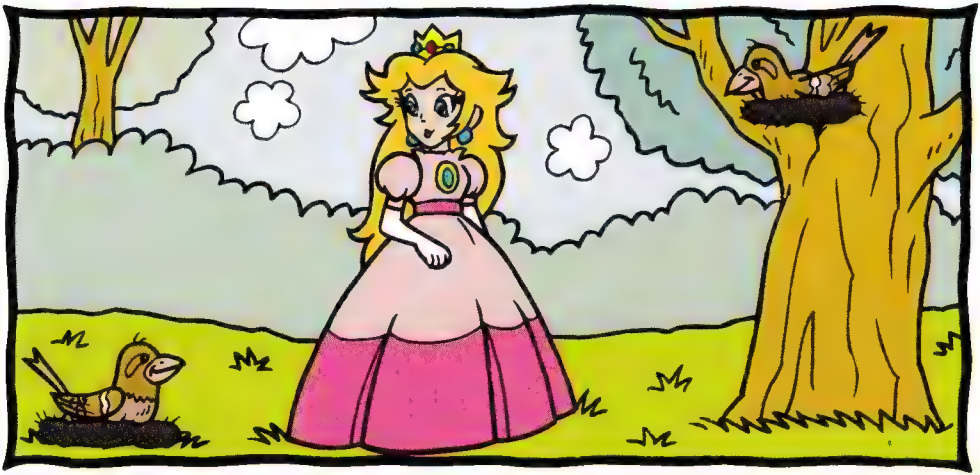

Illustration: Gary Fields

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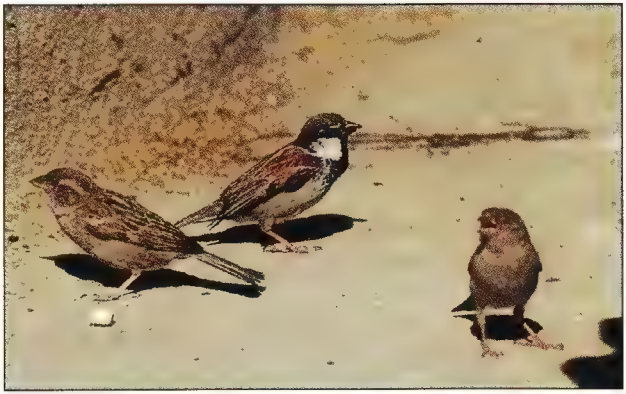
Finches

Finches belong to the Fringillidae family, the largest family of birds. Members of this family live almost everywhere on Earth.

3 A finch is a little bird.



© G. Lacz / Sunset

The chirping of the finches is said to announce the return of spring.

Finches are small birds with cone-shaped beaks for crushing seeds. Some finches live on the ground while others live in trees. They are popular with farmers because they eat weed seed.

Finches prefer to eat seeds, so it is easier for them to find food in winter than it is for birds who are insect-eaters. Because of this, finches don't need to relocate to warmer climates in winter. They are one of the main birds found in the North during winter.

The House Finch

The finch you are probably most familiar with is the house finch. Male house finches have brownish-gray bellies and reddish foreheads and tails. Females are completely brownish-gray.

Finches can live comfortably in cities, building their nests on sculptures and beneath the roofs of buildings.

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What are nightingales best known for?

WILD ANIMALS

1 Saving lives

2 Finding worms

3 Singing

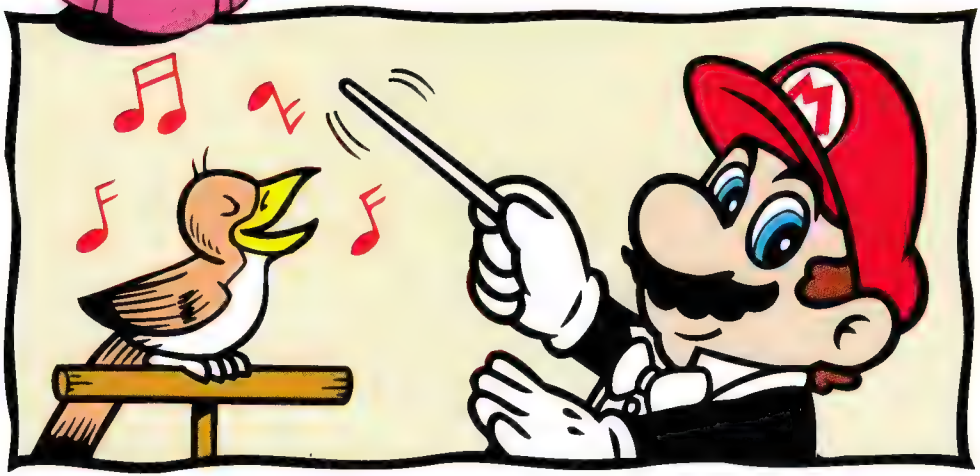

Illustration Gary Fields

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Nightingales

Nightingales have been very popular in folktales and legends throughout the ages because of their enchanting song.

3 Nightingales are famous for their beautiful singing.

© NHPA / Sunset

Male and female nightingales have the same coloring.

The nightingale got its name because it usually sings at night. In fact, the name is a combination of night and the Middle English word *galan*, meaning "to sing." But nightingales don't sing only at night. During mating season, the male sings day and night to let other nightingales know where his territory is. His song is varied and melodious, with frequent trills and high notes.

Dull Coloring

The nightingale itself is rather plain-looking. Its body is mostly brownish-gray, and its tail is reddish-brown. Adult nightingales measure about 7 inches (16 cm) long. Shy birds, nightingales tend to stay close to the ground, feeding on insects, and larvae. Their sharp eyesight and excellent visual memory helps them find their way to the distant areas where they spend the winter. What we call nightingales are actually two species of the thrush family. One species lives in western Europe, and the other lives in northeastern Europe and Siberia. Both species migrate to Africa for the winter.

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What is a whelk?

WILD ANIMALS

1. A sea creature
2. A romantic singer
3. A ship engine

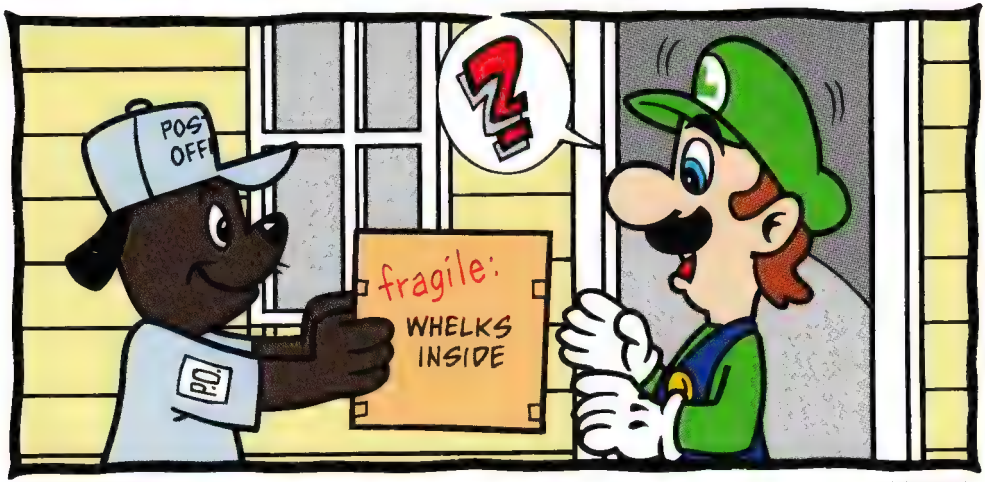

Illustration: Gary Fields

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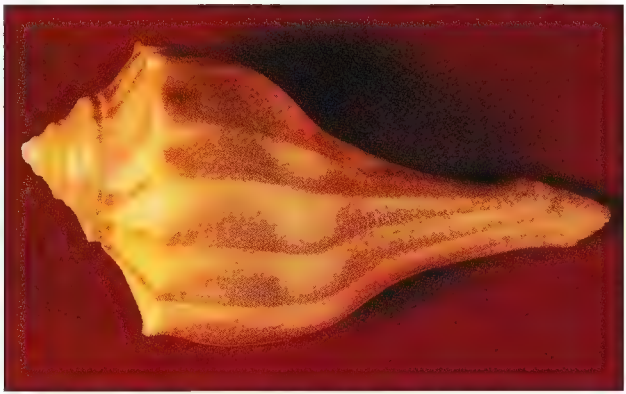
Whelks

A whelk is a marine gastropod, otherwise known as a sea snail. This creature's shell is thick and spiral-shaped and measures anywhere from 3 to 6 in. (7.5-15 cm) long. There is a wide opening with whorled edges at the side.

1 A whelk is a sea creature.



© Don W. Fawcett / Visuals Unlimited

A whelk shell is easily recognizable by its graceful beauty.

Whelks are univalves, or mollusks, which means that their coiled shells grow in one piece. They are carnivorous animals which feed on living as well as dead animals. They use their flat foot sole to creep along the ocean floor and to grab food. The whelk's mouth is found at the end of a long proboscis, or nose. It contains a toothed tongue which is capable of making holes in the shells of the whelk's prey. On the whelk's head are tentacles. Whelks resemble land snails in that they crawl along the ocean floor on their own slime trail.

Reproduction

The female whelk lays several hundred eggs at once and attaches them to underwater stones. When they hatch, tiny, perfectly formed whelks emerge, shells and all. Whelks are mostly found along the northern coasts of the Atlantic Ocean.

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D3 054 35-10

Does a python have feet?

WILD ANIMALS

1 Yes

2 No

Illustration: Gary Fields

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Pythons

The python is one of the 16 to 18 members of the non-poisonous Boidae family of snakes.

The python is a primitive snake believed to have descended from the lizard. Pythons are different from other snakes for two reasons. First, a python has well-formed lungs. Second, on each side of its body a python has small limbs, or spurs thought to be the last remnants of its lizard ancestry. The reticulated python of Southeast Asia is one of the largest snakes in the world, reaching a length of up to 33 feet (10 m) weighing up to 300 lbs. (140 kg). The burrowing python, can be as short as 3 feet (0.9 m) long.

1 **Yes, a python has two tiny hind limbs.**

© G. Lacz / Sunset

A Malaysian reticulated python climbs trees accordion-style allowing it to pounce on an unsuspecting meal at a moment's notice.

Habitats and Eating Habits

Most pythons live in tropical forests and climb trees, but the African python prefers living in the open country where it lies in ambush waiting to attack its prey—hares, rats, or antelope. After pouncing, the python uses its head to smack its victim. It then grabs hold of the stunned animal with its jaw, coils itself around the body to suffocate it, then eats it. A large catch, such as an antelope, will keep the python's appetite satisfied for several weeks.

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Which is a poisonous snake?

WILD ANIMALS

1. Cobra
2. Garter
3. King

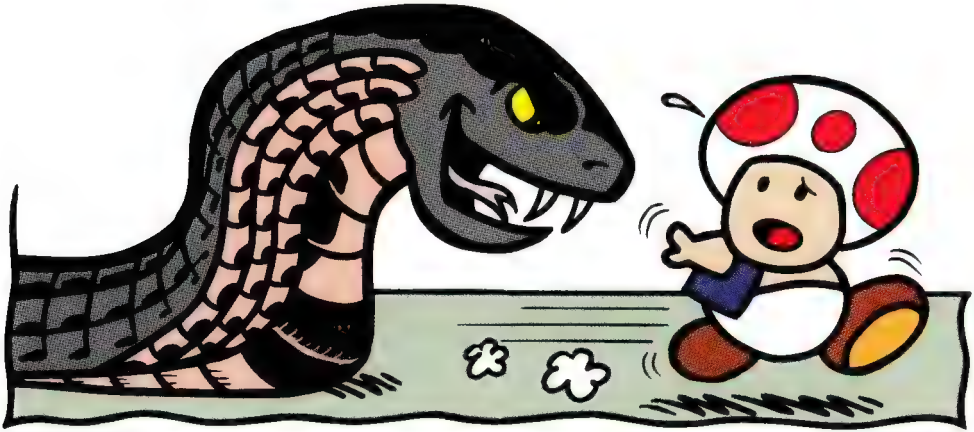

Illustration: Gary Fields

©1995 Nintendo

Cobras

Cobras are recognized by the wide hood they flare from the back of their neck when they are angry or disturbed.

1 The cobra is a poisonous snake.

© Animals / Sunset

Cobras have a deadly bite that paralyzes a victim's nervous system. They mainly eat rodents, but also go after frogs, toads and birds.

Cobras are found throughout the Philippines, southern Asia, and Africa. The African spitting, or black-necked cobra, can spray its venom into the eyes of its victims from up to 8 feet (2.4 m) away, causing great pain and temporary blindness.

Asian Cobras

The king cobra, or hamadryad, of Asia, is the world's longest poisonous snake. It measures about 12 feet (3.7 m) long, but can grow to 18 feet (5.5 m) long. It is olive or brown in color and has bronze-colored eyes. Another Asian cobra, the spectacled cobra, is named for the eyeglass-shaped pattern on its skin. It is also known as the common, Asian, or Indian cobra. Experts believe the Indian cobra is one of the most dangerous of all snakes. In India alone it kills about 10,000 people every year.

Enemies

Mongooses and genets, both mammals of Europe, Asia, and Africa, are among the few animals that can fight a cobra and win.

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How do tigers hunt?

WILD ANIMALS

1 In groups

2 Alone

Illustration: Gary Fields

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Tigers

Tigers are solitary hunters that mainly hunt at night. They like to make surprise attacks, springing on their startled victims.

2 Tigers hunt alone.

© G. Lacz / Sunset

Tigers were once found throughout southern Asia, but deforestation and hunting by humans have greatly reduced their numbers. All tigers have been declared endangered.

Tigers are the largest members of the cat family. Two well-known subspecies are the very rare Siberian tiger and the Bengal tiger. A tiger's coat is usually reddish yellow or tawny, marked with blackish stripes, and white under the belly. Male tigers stand about 40 inches (1 m) tall at the shoulder and weigh from 400 to 600 pounds (180 -270 kg). Females are slightly smaller.

Hunting

Tigers prefer forests, but also adapt to mountains, grasslands and jungles. They hide in the brush or in thick grass and quietly stalk their victims. They prefer large prey such as deer, antelope, and wild pigs, but also eat smaller animals like frogs, fish and monkeys.

Tiger cubs—usually two or three but as many as six to a litter—can kill for themselves when they are seven months old. But they stay with their mother to learn the finer points of hunting until the age of two.

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Where do macaques live?

WILD ANIMALS

1. Eastern Europe
2. Australia
3. Asia

Illustration: Gary Fields

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Macaques

There are 12 species of macaques, all of which live in Asia except for the Barbary ape, which lives in northern Africa. All macaques live in groups that have a leader.

3 Macaques live in Asia.

© G. Lacz / Sunset

In cities in India, rhesus monkeys will eat just about anything they find.

Macaques vary widely in physical appearance, but shared features include arms and legs of the same length, round dog-like muzzles, and brown or black fur. Their sizes range from 16 to 28 inches (41-70 cm) and their weight from 8 to 18 pounds (3.5-8.3 kg) depending on the species and the gender. Some macaques have long tails, others have short ones, and some don't have any at all. In India, the macaque known as the rhesus monkey can be found everywhere—in temples, public gardens, train stations—begging and scavenging for food. They are omnivorous, eating everything from insects and spiders to fruit and leaves.

Group Life

Macaques live in groups headed by a dominant male. Each member of the group has its recognized place in the social hierarchy.

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D3 054 37-09

Are there wild elephants in Asia?

WILD ANIMALS

1 No there are not

2 Yes, there are

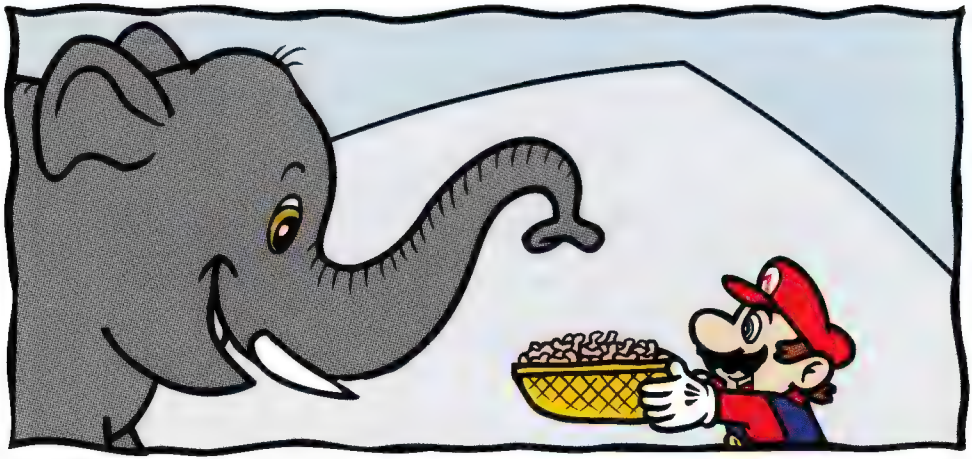

Illustration. Gary Fields

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Asian Elephants

Asian, or Indian, elephants have long been domesticated by humans. They are used to haul logs in lumber forests and are also used for show in processions.

2 Yes, there are wild elephants in Asia.

© Vaudet / Sunset

Wild elephants used to roam Asian countries in great numbers. They are gradually disappearing because of hunting and the destruction of their natural habitats.

Elephants are the largest living land animals. There are now only two surviving species, the African and the Asian elephant. The other species are extinct. While African elephants live in the savanna, Asian elephants prefer thick forests. Both species are endangered, or nearly so due to ivory hunting, and deforestation.

Ears

While the African elephant reaches heights of 13 feet (4 m), the largest of the Asian species are only about 10 feet (3 m) tall. Asian elephants also have much smaller ears. This might be because, being smaller and more protected from the Sun, Asian elephants don't need such big ears to cool them down. The huge ears of African elephants—sometimes as long as 5 feet (1.5 m) from top to bottom—provide lots of surface area where blood vessels fan out, giving off the elephant's body heat.

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What is the difference between gavials and crocodiles?

WILD ANIMALS

1. Gavials are bigger than crocodiles.
2. Gavials are more dangerous than crocodiles.
3. Gavials have 6 legs and crocodiles have 4.

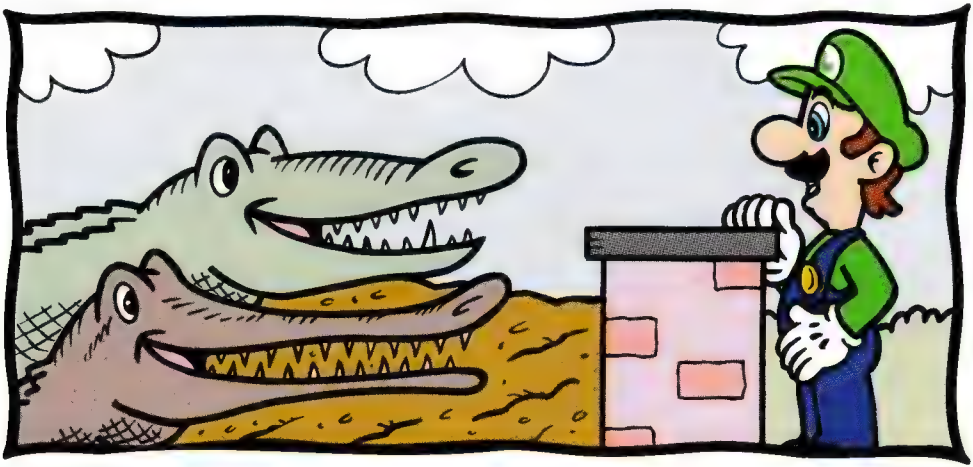

Illustration: Gary Fields

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Gavials

The gavial is a large reptile related to the crocodile. It usually reaches an adult length of 12 to 15 feet (3.5–4.5 m). It can, however, grow up to 30 feet (9 m) long.

1 Gavials are bigger than crocodiles.

© S.T.F. / Sunset

Gavials are noted for their long, thin snouts.

The gavial is a member of the crocodile family which includes the largest reptiles. Despite its size, the gavial is harmless to humans because its long, narrow snout isn't suited for capturing large prey. A gavial's snout is lined with many long, pointed teeth that curve slightly inward. Each works like a mini harpoon to spear fish, the mainstay of the gavial's diet. Gavials live in the great rivers of India, Pakistan, Bangladesh, and Myanmar. They also eat water birds and some small mammals that come to the water to drink. Like all reptiles, gavials are cold-blooded, and lay eggs.

False Gavial

The Malaysian gavial, also known as the false gavial, is only about half the size of the Indian gavial. Gavials have become nearly extinct in recent decades because of dams, hunting, and net fishing. Only about one hundred are believed to survive in the wild. India, however, has been building preserves, hoping to save the species.

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Do giraffes live in herds?

WILD ANIMALS

1 Yes

2 No

Illustration: Gary Fields

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Giraffes

Giraffes form loosely organized herds of two to ten members, which individuals may leave and then rejoin over time. Each herd is led by an adult bull.

1 Yes, giraffes live in herds.

© G. Lacz / Sunset

Giraffes are very quiet animals. Low call notes and moans are the only sounds giraffes make.

Giraffes live in the dry savanna south of the Sahara Desert in Africa. They are rather independent, but congregate in herds to defend themselves from carnivorous, or meat-eating, predators, such as lions, that roam the savanna. When they spread wide their front legs and bow their necks to drink from a river, giraffes are very vulnerable, so other members of the herd always keep watch. When startled, giraffes can gallop up to 30 miles per hour (48 km).

The giraffe is the tallest animal in the world. Males can grow as tall as 18 feet (5.5 m). Giraffe tongues are very long, up to 18 inches (45 cm), allowing them to eat a whole bunch of leaves at one time. Giraffes sleep very little. In fact, some zoologists believe that they don't sleep at all!

During mating season, males compete for females by butting with their heavy necks in one-on-one duels. These fights can be fierce, but never cause serious injury.

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What is a bison?

WILD ANIMALS

1. A desert bush
2. An animal
3. A two-wheeled vehicle

Illustration: Gary Fields

©1995 Nintendo

Bison

There are two subspecies of bison: the American bison, commonly, but incorrectly, called buffalo; and the European bison or wisent. Until the 19th century about 50 million bison lived on the Great Plains of North America.

2 A bison is an animal.

© G. Lacz / Sunset

Bison eat bark, tree buds, lichen, mushrooms, and other plants.

Bison have large forequarters, with a large hump over their shoulders, and more slender hindquarters. They stand up to 6 feet (19 m) high and weigh from 1,800 to 2,400 pounds (850–1,100 kg). Both sexes have short, sharply-pointed horns that curve out from the sides of their massive heads. Both varieties of American bison, the plains bison and the woods bison, have a distinctive long, shaggy coat on its forequarters. Having no such coat, the larger European bison appears more oxlike.

Plains Indians relied on the plentiful bison as an important source of food, skins, bones, and fuel. But between 1830 and 1889, white settlers killed millions of bison for hides and sport until only about 500 remained. Today, about 30,000 bison live in protected areas and on private ranches.

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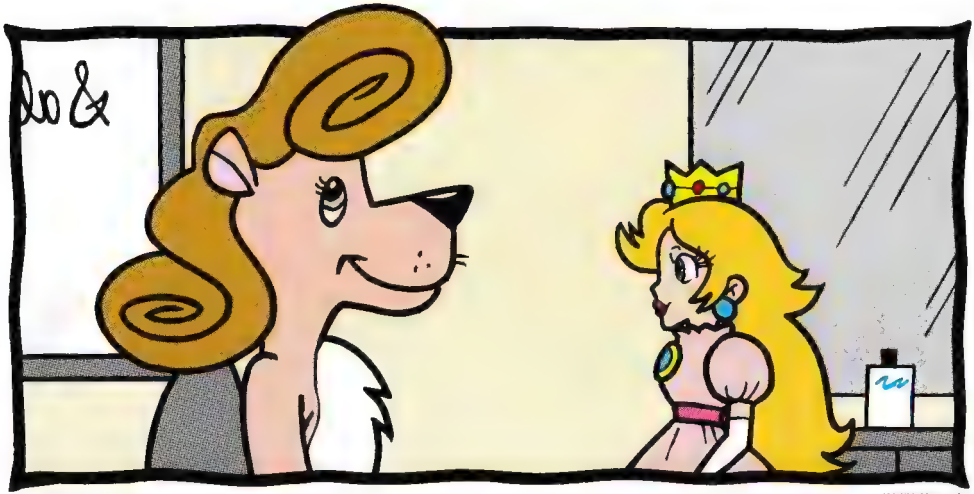
Do female lions have manes?

WILD ANIMALS

1 Yes, female lions have manes.

2 No, only male lions have manes.



Illustration, Gary Fields

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Lion Manes

The manes on male lions start to grown when they are about two years old. Wild lions live an average of 8-10 years. Lions in captivity have been known to live as long as 15 years.

2 No, only male lions have manes.

© Sunset

The lion's mane serves as protection during fights with other male lions.

The lion's mane usually covers the head and neck, but can sometimes spread to the shoulders and stomach. This mass of fur can be long or short. The healthier the lion, the longer the mane. The coloring can range from light brown to black. The fact that the male lion has a mane while the female does not is called sexual dimorphism. It takes but a quick glance at the animal to recognize its sex.

The Prized Mane

Years ago warriors from the Masaï tribe, armed with only a lance, are said to have held contests during which the first hunter to catch hold of a lion's tail was the hero of the day who was awarded the lion's mane. With the mane, the triumphant warrior made a big impressive headdress which he would wear to ceremonies.

Today lion hunting is against the law in Kenya so the Masaï tribesmen now wear ostrich feather headdresses.

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D3 054 40-18

Where do wild lions live?

WILD ANIMALS

1 South America
2 Australia
3 Africa

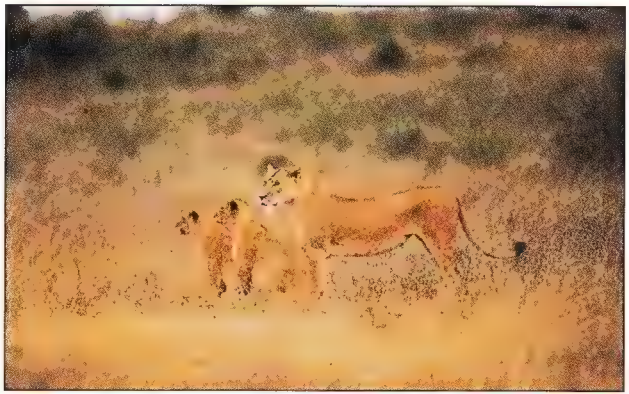
Illustration Gary Fields

©1996 Nintendo

Lion's Habitat

Wild lions live in flat grasslands of Africa —in South Africa, Tanzania, and south of the Sahara Desert. Before man began to hunt the "king of the beasts," they roamed through most of Africa, some parts of Europe, Iran, and India.

3 Lions live in the wild in Africa.



© Sunset

The lion's coloring allows it to blend right into its background.

There are still a few lions in Asia, in northwestern India but all others are found in flat African grasslands known as savanna. Savanna is open land which made it even easier for lions to be killed for sport by hunters or by herders protecting their herds. Today most lions live on protected natural reserves where their habits can be studied.

Heat Sensitive

Lions are very sensitive to heat and require large amounts of water. During droughts they are known to travel enormous distances to track down water sources. Lions prefer to rest under the trees and in the bushes of the savanna rather than in the open under the blazing sun. Not only does the protection afford them comfort, it is also excellent camouflage for when they are hunting.

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Do female crocodiles sit on their eggs?

WILD ANIMALS

1 Yes, female crocodiles sit on their eggs.

2 No, female crocodiles do not sit on their eggs.

Illustration: Gary Fields

©1996 Nintendo

Crocodile Eggs

Female crocodiles lay up to 90 white eggs in nests made out of vegetation or in pits dug in the sand near water.

2 **No, female crocodiles do not sit on their eggs.**

© Sunset

A baby crocodile emerges from the egg without any help.

Mother crocodiles cover their egg nests with mud or branches and leaves. The organic decomposition of the nest materials keeps the eggs warm—a natural incubator. Even though the mother crocodile does not sit on her eggs, she still protects them fervently.

Boy or Girl?

The sex of the crocodiles is not determined at the time of fertilization, as it is in many species. In crocodiles it depends on the temperature of the nest. Temperatures between 82.4°F and 86°F (28°C-30°C) produce females while temperatures between 89.6°F and 93.2° F (32°C-34°C) produce males. Strangely enough, mother crocodiles do their best to keep the temperatures between 86°F and 89.6°F (30°C-32°C) in order to ensure the same number of males and females.

Three or four months after the mother crocodile has laid her eggs, the young crocodiles start to emerge. They cry out to get their mother's attention. The mother uncovers them and then carries them to the water in her mouth.

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Are there crocodiles in the ocean?

WILD ANIMALS

1 Yes
2 No

Illustration Gary Fields

©1995 Nintendo

Crocodiles

All crocodiles are powerful swimmers, and on land they either slither along on their bellies or, more slowly, walk on four feet.

1 **Yes. Crocodiles mainly inhabit swamps, lakes and rivers, but some species can live in sea water or brackish water.**

© NHPA / Sunset

Due to overhunting, the American and Nile crocodiles are considered endangered species.

Crocodiles have been around for about 200 million years. These armored, aquatic reptiles live in tropical parts of Africa, Asia, Australia, and the United States. Crocodile bodies are long and heavy with stumpy legs. The largest species is the saltwater crocodile, which can grow up to 30 feet (9 m) long. Like all reptiles, crocodiles are cold-blooded. To keep their body temperature stable, they come ashore at sunrise to bask in the sun and then return to the water to cool off. In extreme cold or drought, crocodiles bury themselves in mud and lie dormant.

Feeding Habits

Crocodiles feed mainly on fish, although they can also trap larger mammals and birds. They lie in wait for these animals to come close to water, then seize them in their powerful jaws or knock them down with their heads or tails and drag them under water. Due to overhunting, the American and Nile crocodiles are considered endangered species.

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What happens when a shark loses or breaks a tooth?

WILD ANIMALS

1. A brand new tooth grows in.
2. An inside tooth shifts outward.
3. Nothing—a shark has so many teeth that it can survive the loss of a few.

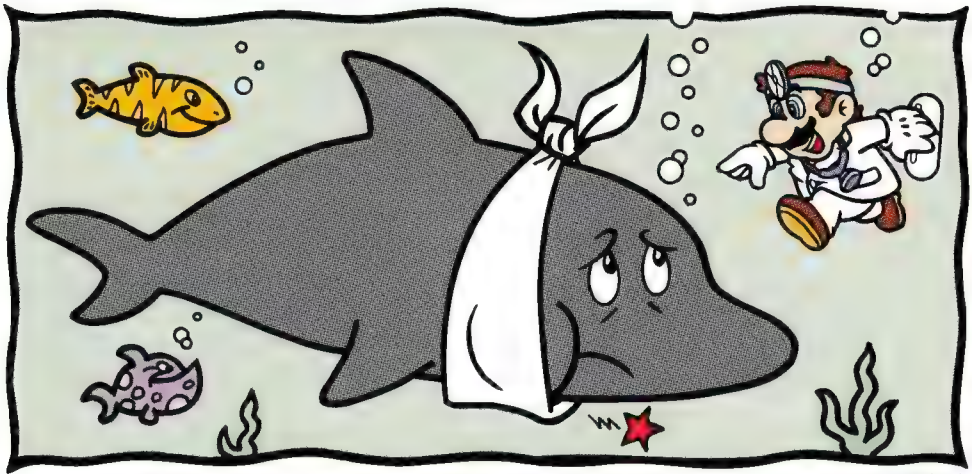

Illustration: Gary Fields

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Sharks

Sharks are ancient undersea hunters. With their keen senses and lack of natural enemies, they have dominated the seas for over 100 million years.

2 **An inside tooth shifts outward to replace the lost tooth.**

© Doug Perrine / Sunset

Shark attacks on humans are rare, but one in three is fatal. The most dangerous species are the great white, hammerhead, tiger, and blue sharks.

Most sharks are grey and have leathery skin covered with small, sharp scales. Shark species are quite varied, ranging from the whale shark, at up to 49 feet (14.7 m) long, to the cookie-cutter shark, at less than 19 inches (47.5 cm).

Aggressive Hunters

Sharks prey on most kinds of large marine animals. Some species feed on plankton, an abundant and microscopic marine plant, by filtering it through their gill rakers. Many kinds of sharks feed on anything they can find, including a wide variety of fish, seals, turtles, birds, whales, crabs, and even garbage dumped from ships.

Shark attacks on humans are rare, but one in three is fatal. The most dangerous species are the great white, hammerhead, tiger, and blue sharks.

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Where does ivory come from?

WILD ANIMALS

1. Coral reefs
2. Sharks' teeth
3. Elephant tusks

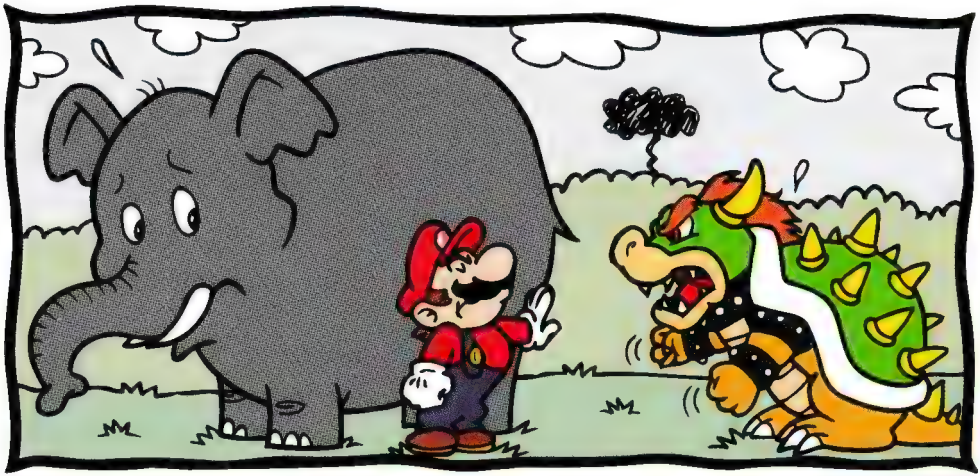

Illustration: Gary Fields

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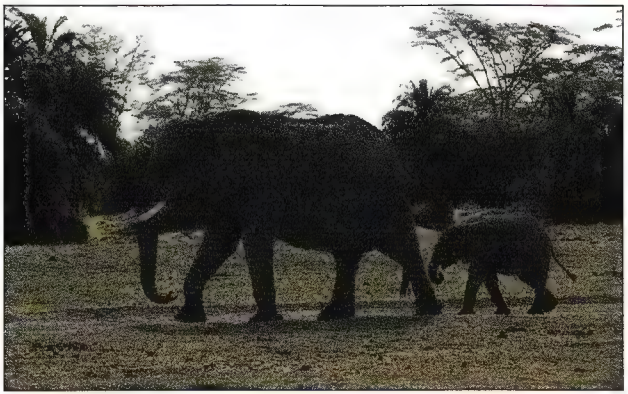
Ivory

Ivory is the bone-like material that makes up elephants' tusks. It is so valuable that elephants are killed by hunters, legally, and poachers, illegally, just for their tusks.

3 Ivory comes from elephant tusks.



© Gérard Lacz / Sunset

Elephants' tusks are enlarged incisors, or cutting teeth, which begin near the backs of their skulls.

Carved ivory has been used for decoration since the time of the ancient Egyptians. Small pieces of ivory are used in some furniture, chess pieces, and jewelry. Larger pieces are used for billiard balls, piano keys, and handles. Ivory is used in art for carving statues, and the powder is used in ink and artists' pigments.

Government Regulation

During the late 1980s, as Africa's elephant herds were thinned out by hunting and poaching, environmentalists led a worldwide effort to end the ivory trade. In 1989 the U.S. and the European Union banned all ivory imports. Today, less than one-quarter of commercial ivory is taken from elephants killed for that purpose. Most ivory is taken from elephants that died natural deaths. Manufacturers of billiard balls and pianos have also started using hard plastic resins in place of ivory.

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What is an impala?

WILD ANIMALS

1. A type of antelope
2. A type of spear
3. A type of jewel

Illustration Gary Fields

©1996 Nintendo

Antelope

Impala live in herds except during the mating season, when the males establish territories where the females join them.

1 An impala is a type of antelope.

© Gérard Lacz / Sunset

Impala can leap 10 feet (3 m) high and distances of 30 feet (9 m). When they jump, the black streak on their haunches points in the direction in which the herd should flee.

Impala are a type of antelope living in eastern and southern Africa. Impala are about 28 to 40 inches (70 to 100 cm) tall at the shoulder and weight 130 to 150 pounds (60 to 70 kg). They are chestnut brown, with lighter brown on the flanks and white bellies. The male has U-shaped horns which make one spiral turn. The female has no horns. Females stay with the young on one side of the herd and males on the other. During the dry season, impala often group into herds of hundreds, because there is safety in numbers. After the dry season is over, the males of the herd will compete with each other for territory before mating can begin.

Danger and Defense

Impala like being near water and they avoid open country, preferring scrub and thornbrush. Their main predator is the leopard. When threatened, the herd will leap into the air in all directions. This may confuse their predator trying to single out its victim.

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Are all snakes poisonous?

WILD ANIMALS

1 Yes

2 No

Illustration: Gary Fields

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Snakes

There are 2,300 species of snakes, 300 of which are poisonous. All snake species rely on a sharp sense of smell, speed and fangs to catch their prey.

2 No, not all snakes are poisonous.

© Gérard Lacz / Sunset

This is a non-venomous garden snake. It uses teeth that curve inward to trap and keep its prey.

Snakes are limbless reptiles with long, tubelike, scale-covered bodies that contain between 100 and 300 vertebrae. The skin and scales are shed regularly and usually in a single piece. Some snake species shed once every 20 days or so, while others shed once a year. Snakes' eyes have no lids and are protected by a hard, clear shell called the spectacle. Snakes' eyes are therefore always open. Their nervous systems are well-developed and they are between fish and mammals in intelligence. They may look scary or hiss when cornered, but snakes are very easy to domesticate.

Snake Venom

Poisonous snakes inject venom into their prey through hollow fangs. Venom is a mixture of proteins that destroy tissues in the body. Venom usually acts on the nerves or on the blood to disable or kill prey. Snakes rarely eat anything they have not killed themselves.

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What is a bovine?

WILD ANIMALS

1. A cow, ox or buffalo
2. A wind instrument
3. A grape used in wine making

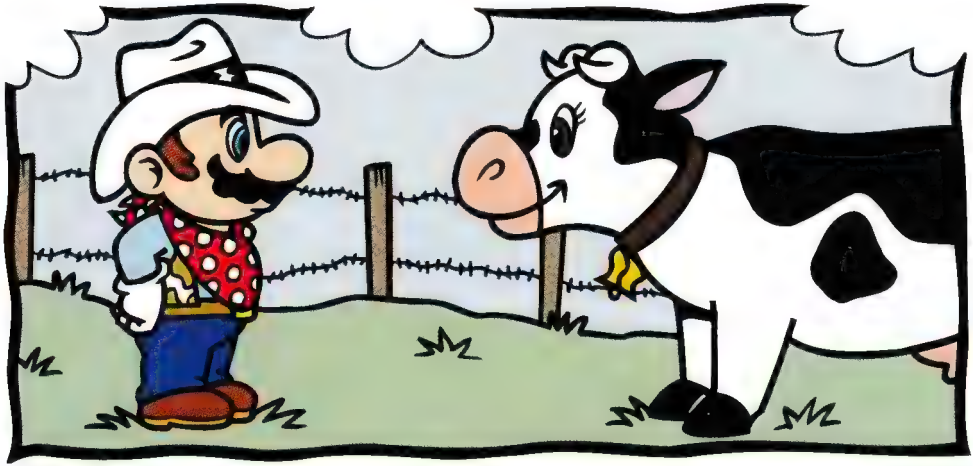

Illustration: Gary Fields

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Buffalo

Like cows, buffalo chew cud and have cloven, or split, hooves and permanent horns. They can also be domesticated for farm work.

1 **A bovine is an animal such as a cow, ox or buffalo.**

© G. Lacz / Sunset

Buffalo are usually quite peaceful and prefer to soak at water holes for as long as they can do so undisturbed. Only the cape buffalo is known for a tendency to charge.

Buffalo are oxen native to Asia and Africa. The North American oxen we call buffalo are actually bison. Asian buffalo, also known as water buffalo, is native to India. It has short, stiff hair and much of its hide is hairless. In the wild, water buffalo can be dangerous, but since ancient times, many have been domesticated and used to pull plows.

Charge!

The cape buffalo is reputed to be the most dangerous because it usually charges when it is disturbed. A 4 to 5-foot-tall (122 to 152-cm-tall), 1-ton creature is difficult to stop in mid-charge. The cape buffalo's only natural enemy is the lion, but hunting and disease have reduced its numbers. There are still herds of cape buffalo in national parks.

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What animal loves to eat crocodile eggs?

WILD ANIMALS

1. Rhesus monkey
2. Garter snake
3. Monitor lizard

Illustration: Gary Fields

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Monitor Lizard

Monitors eat a wide variety of animals, including crocodile eggs.

3 Monitor lizards love to eat crocodile eggs.

© McDonald / Sunset

Nile monitors are excellent swimmers and spend most of their time in the water except when resting.

Monitors are large lizards. The water monitor is second in size only to the komodo dragon. Their streamlined bodies can grow up to 9 feet (2.7m) long. Unlike most lizards, monitor lizards have long, forked tongues. When cornered, a monitor will hiss and lash its tail, bite, and slash with its claws.

The Nile monitor, found in Africa's Nile River, is a good swimmer. Other monitor species are good tree climbers. Monitors live in warm Asian and African regions. They make up one of the oldest groups of lizards, which first appeared on Earth about 130 million years ago.

Monitors and Eggs

Monitors will eat turtles, fish and birds, but they prefer crocodile eggs. To lay their own eggs, during the rainy season, Nile monitors empty out termite burrows which have been softened by the rain. They lay their eggs and seal up the burrows. When the eggs hatch, the newborn monitors eat the termites in the burrow before venturing out to the marshy areas where they will learn to hunt and live.

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What is a Thomson's gazelle?

WILD ANIMALS

1. A type of grasshopper
2. A type of antelope
3. A type of lizard

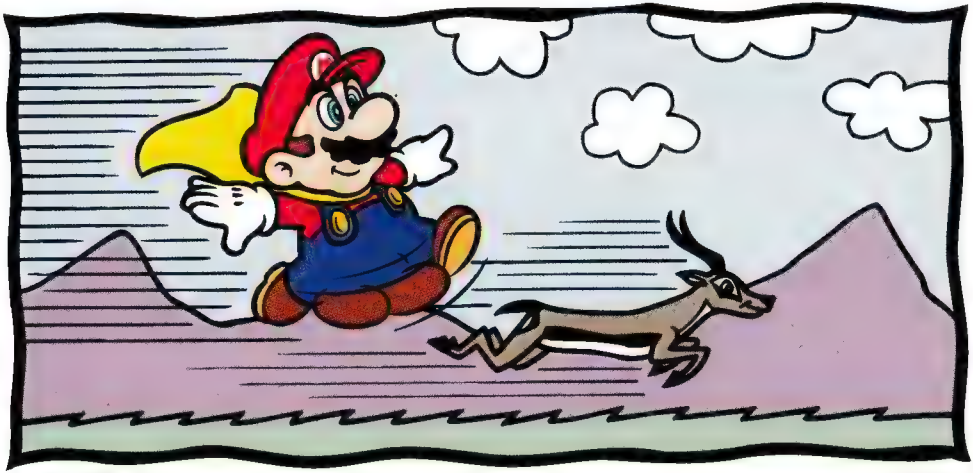

Illustration. Gary Fields

©1996 Nintendo

Thomson's Gazelle

Thomson's gazelles live in the eastern African savannah—dry, grassy plains. They can live without drinking water for long periods of time.

2 A Thomson's gazelle is a type of antelope.

© McDonald / Sunset

Gazelles have many natural predators in the savannah.

Like all gazelles, Thomson's gazelles are fawn-colored and have a white rump and belly and black-and-white faces. At one time, large herds of Thomson's gazelles roamed the savannah, but their numbers have been reduced by hunting and by the use of land for farming. Gazelles mainly eat grass, but in dry country they can eat bushes and fleshy plants.

Social Behavior

The males of the herd establish territories which they defend against other males. When females pass by, they will mate with the males. In the dry season, the males join up with the herd again and together, they seek out better pastures.

Thomson's gazelles' enemies are predators: the lion, cheetah, leopard, and hyena. When attacked, they do not run away, but instead, dart around or run about 700 feet (200 m) before turning around to see where the enemy is.

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Where do basilisk lizards live?

WILD ANIMALS

1. Central Europe
2. Southern Africa
3. Central and South America

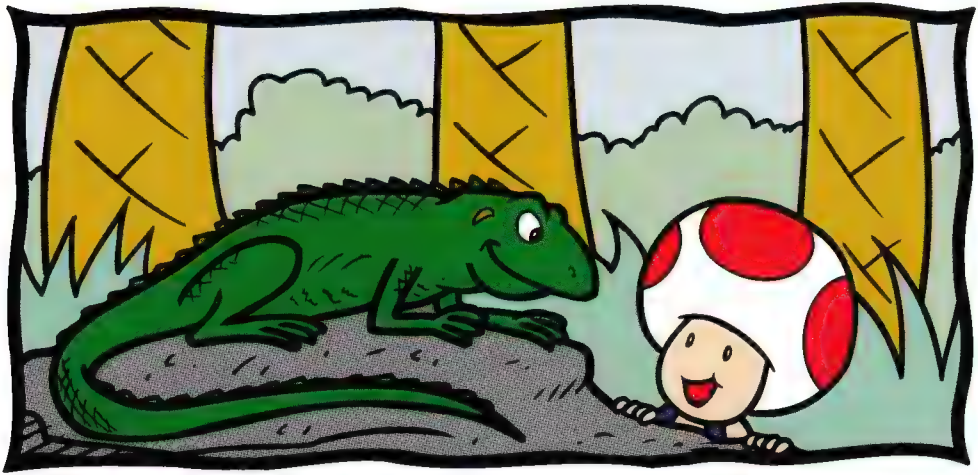

Illustration: Gary Fields

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Basilisks

Basilisks are named after a mythical monster with a fatally poisonous breath and glance.

3 **Basilisk lizards are found in the tropical areas of Central and South America, from Mexico to Ecuador.**

© Animals Animals / Sunset

A basilisk's back legs are much longer than its front legs. When it rests, it squats like a frog.

Four species of basilisk lizard live in tropical America, from Mexico to Ecuador. Members of the Iguana family, they may look scary, but they are actually harmless. They are fairly sluggish on all four legs but can move quickly on their hind legs. In fact, they are capable of running across water.

Physical Characteristics

Omnivorous, tree-dwelling lizards, basilisks have a thin, whip-like tail that makes up most of their length, an average of 3 feet (1 m). A male basilisk has a crest that stands straight up on the middle of its back and tail, or on its head. Like all lizards, basilisks have dry, scaly skin, claws, and external ear openings. Banded basilisks are brown with yellow stripes on each side of the body. Other species have yellowish- or greenish-brown skin.

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Where do vampire bats live?

WILD ANIMALS

1. Deserts of Africa
2. Tropical areas of North and South America
3. Tundra of Siberia

Illustration Gary Fields

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Vampire Bats

Vampire bats are nocturnal, spending the day in sheltered roosts. At night, they come out to feed on the blood of almost any quietly resting, warm-blooded animal.

2 Vampire bats are native to tropical areas in North and South America.

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Using their razor-sharp incisors, vampire bats bite into the flesh of warm-blooded animals. They usually attack domestic animals and only occasionally bite humans.

There are two main types of bats. Megabats navigate using their eyesight, while microbats, including vampire bats, use echolocation. Microbats emit high-frequency sounds that they hear as echoes reflected off the surfaces of objects. These echoes help bats detect the position, distance, and even the identity of the things around them. Using echolocation, microbats can see using sound and are able to navigate in complete darkness.

Bat Diet

Not all bats feed on blood like vampire bats. Many kinds of bats are insectivores, catching insects in flight or on stationary objects. Most megabats eat fruit. Other types of bats eat flower parts or consume flower nectar using their very long tongues. Still other kinds of bats are omnivores, eating plants and insects, small amphibians, lizards, birds, and mice.

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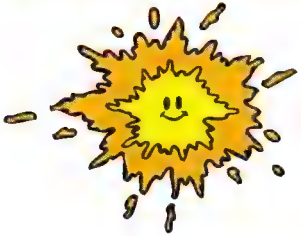
Do bats migrate?

WILD ANIMALS



1 No, bats do not migrate.

2 Yes, some bat species migrate.

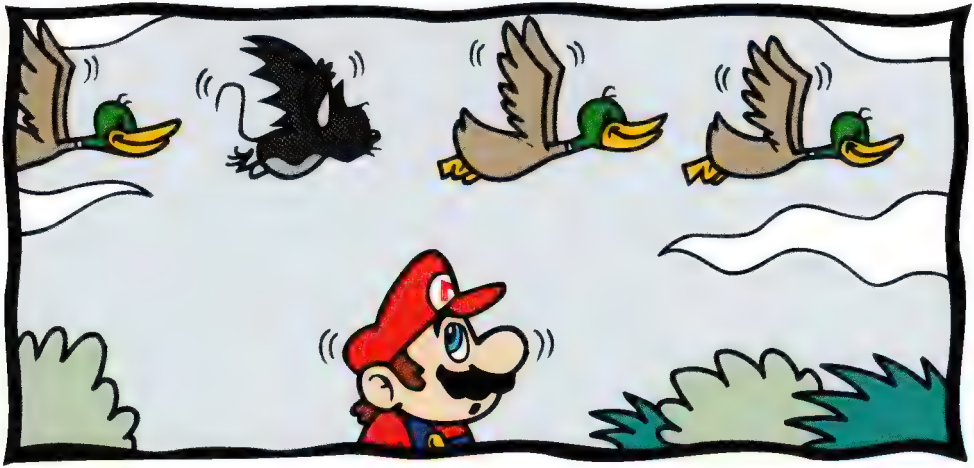


Illustration: Gary Fields

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Bat Migration

Many bats living in temperate climates move from warm-weather roosts to winter hibernation spots. They often return to the same roosts year after year.

2 Yes, some bat species migrate before winter.

© Goetzhetuck / Sunset

In winter, some species of bat migrate to warmer areas. Others hibernate in sheltered areas, such as hollow trees, where they pack together to keep warm.

Migration is the periodic movement of animals from one place to another. Animals migrate for different reasons. They may go in search of food after their existing food supply is depleted. Animals also migrate when changes in the weather make it difficult for them to survive.

Migratory Patterns

Bats of the same species living in many different regions will sometimes travel to the same winter hibernation spot or nursery roost to give birth to young. Female Mexican free-tailed bats migrate from Central Mexico to Texas and other nearby states during the spring. They probably mate during the winter or on their way north in the spring. Each fall, they return south. This migration pattern allows pregnant females to spend the summer in areas where they do not have to compete with males for food.

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Are whales a protected species?

WILD ANIMALS

1 Yes, there have been whaling regulations since the late 1940s.

2 No, whale hunting is not forbidden.

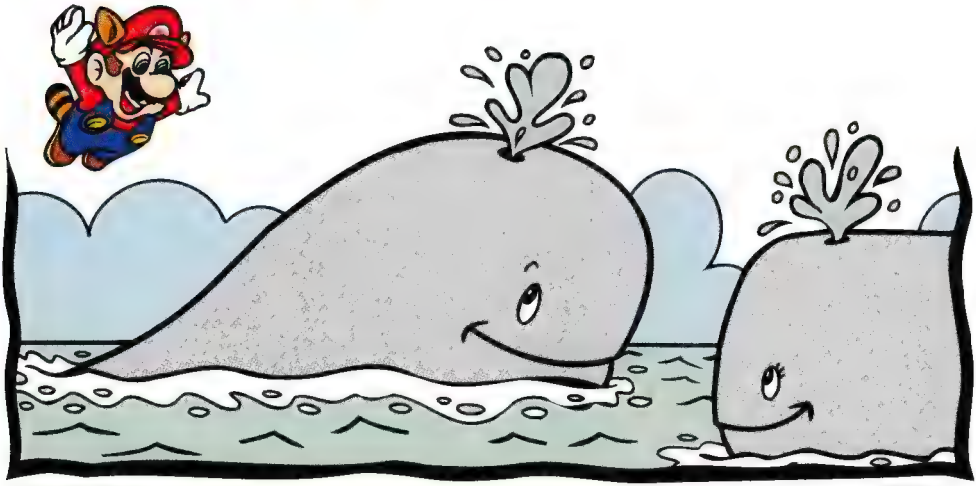

Illustration: Gary Fields

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Whaling

For many centuries, whaling was regulated only by the number of whales available, the ability of whalers to catch them, and the demand for whale oil and bone.

1 **Yes, whales have been a protected species in many parts of the world since the late 1940s.**

© Animals Animals / Sunset

Whales are the only mammals that spend their whole lives in the water. Whales belong to the order *Cetacea,* which includes the 78 known species of whales, dolphins, and porpoises.

Whales have been hunted since prehistoric times. Hunting whales as an organized business began around 875. Whaling off the coasts of Spain and France was a major industry by the 12th century. Because of overfishing, the supply of whales in this area dwindled after 1550, and whalers sought out new hunting areas, including the coast of Newfoundland in Canada. Later, hunting shifted to the Davis Strait of Greenland. This area was depleted by the 19th century. Whales were also hunted off the northeast and northwest coasts of the U. S. until the early 1900s.

Whaling Regulation

In 1946, the International Whaling Commission (IWC), an organization of 24 whaling nations, was formed to regulate the whaling industry. By the late 1980s, many nations had greatly decreased or entirely halted all whaling activities.

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Are parrots and parakeets related?

WILD ANIMALS

1 No, parrots and parakeets belong to two different families.

2 Yes, parakeets are actually a type of parrot.

Illustration: Gary Fields

©1996 Nintendo

Parakeet

Parakeets and other members of the parrot family live in warm regions all over the world. They are generally vegetarians, feeding on seeds, fruit, leaves, and flowers.

2 **Yes, parakeets are small members of the parrot family, *Psittacidae*.**

© G. Lacz / Sunset

Parakeets have brightly colored feathers and are very active birds. They need a lot of space to fly around.

Most parrots are very agile birds with brightly colored plumage. They have relatively large heads for their bodies, short necks, powerful hooked bills, and short legs. Their feet have four toes each, two pointing forward and two pointing backward. This makes it possible for parrots to grip branches and grasp food with their feet, something which is impossible for other birds. Parrots also use their bills to grab hold of branches when climbing. They use their long, thick tongues for drinking and gathering nectar from flowers.

Parrot Behavior

Parrots can produce a wide range of loud twitters and shrieks, and parrots that live in the company of humans can be taught to mimic words and phrases.

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Why do birds sing?

WILD ANIMALS

1. To communicate hunger or danger, and to attract a mate
2. To exercise the beak and throat muscles
3. To entertain other animals

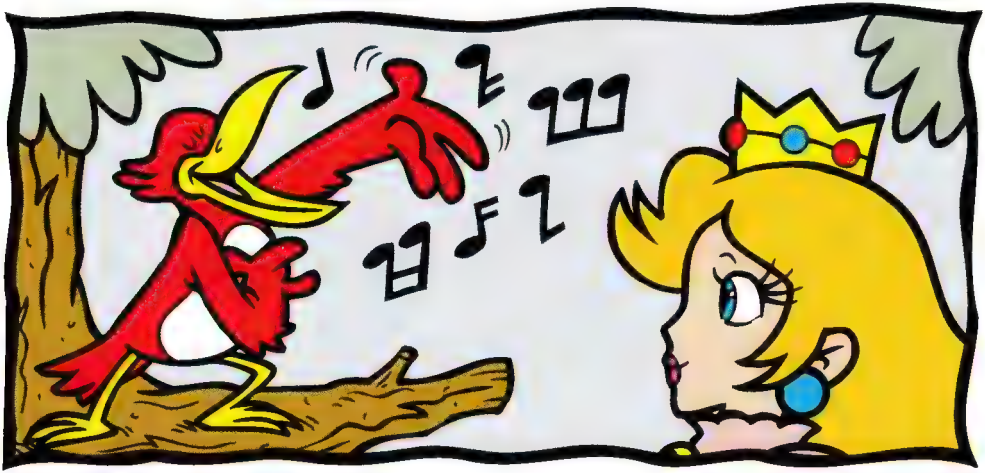

Illustration: Gary Fields

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Bird Song

A few bird species, including storks and some types of vultures, are mute. Most birds are capable of making simple sounds, and some produce elaborate songs.

1 **Birds sing to communicate certain messages, such as hunger or danger, and to attract a mate.**

© Glenn Oliver / Visuals Unlimited

The top of a spruce tree provides a perfect stage for this white-crowned sparrow to sing his song.

Song is produced mainly by male birds, for the purpose of marking territory and attracting a mate. Some species repeat a single note or series of notes over and over, while others, including the mockingbird and American mimic thrush, have a repertoire of hundreds of notes.

Learning from Parents

Bird song may be either learned or hereditary—passed on through the genes—or both. For example, baby chaffinches are able to sing a simplified song at birth but must learn the true song by copying adults. Most birds will copy songs made only by their own species. Other birds, such as mynas, lyrebirds, and starlings, sometimes copy the songs of other birds.

When they are in danger, many birds emit a short, specific alarm call signaling the need to hide.

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What do all vipers have in common?

WILD ANIMALS

1. All are poisonous.
2. All have rattles.
3. All live in the water.

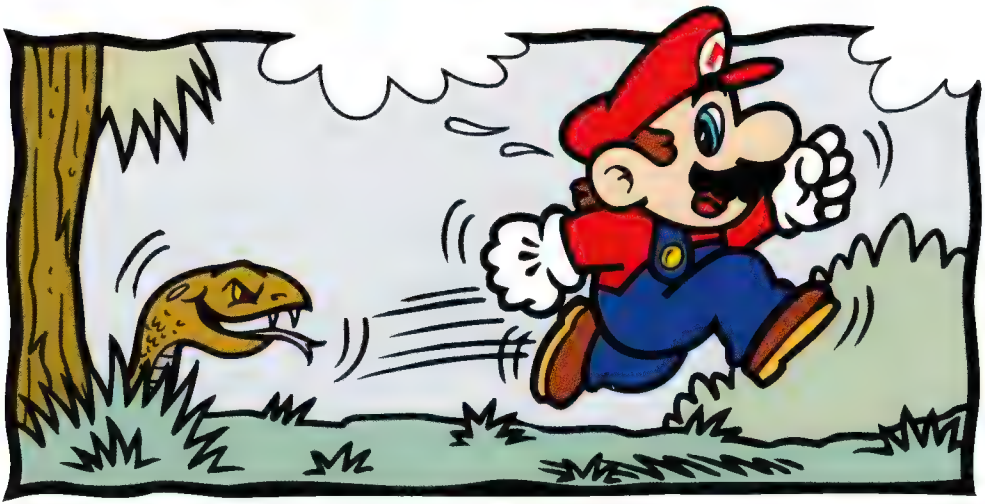

Illustration: Gary Fields

©1996 Nintendo

Viper

There are about 200 species of viper, all belonging to the family *Viperidae*. Although vipers live all over the world, most are found in Africa.

1 Vipers are a family of poisonous snakes.

© G. Lacz / Sunset

Vipers have a broad, triangular head which is usually covered with scales. Their eyes have vertical pupils.

Vipers inject venom into their prey with their two sharp, hollow fangs. The fangs fold back against the roof of the mouth when not in use and swing quickly into place to strike. Vipers have camouflage coloring that helps them blend into their natural surroundings.

Two Subfamilies

There are two groups, or subfamilies, of viper: Old World vipers, and pit vipers. Old World vipers live in Europe, Asia, and Africa. Most are slow and stout, with broad heads. Some Old World vipers are terrestrial, living on the ground, while others are arboreal, making their home in trees.

Pit vipers, including copperheads and rattlesnakes, live primarily in North and South America. They have a heat-sensitive organ located between the nostrils and eyes. This pit organ helps them aim accurately when striking prey—usually small, warm-blooded animals.

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What is a blue-footed booby?

WILD ANIMALS

1. Prehistoric flying mammal
2. Species of endangered sea bird
3. Lizard native to the Sahara desert

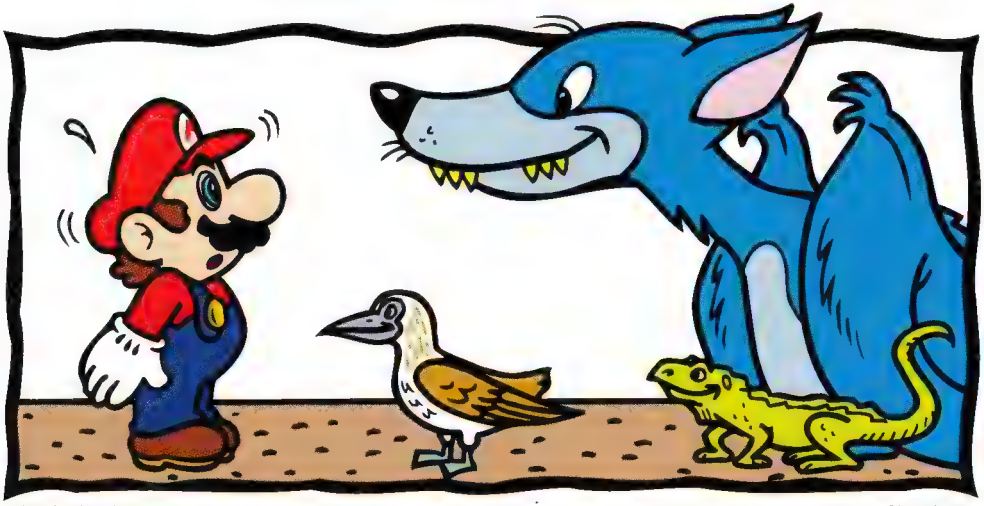

Illustration: Gary Fields

©1996 Nintendo

Blue-footed Booby

Blue-footed boobies are native to the world's tropical and subtropical islands. They got their name from sailors who thought they weren't very smart to land on ships and let themselves be caught.

2 The blue-footed booby is an endangered sea bird.

© John Gerlach / Visuals Unlimited

Two blue-footed boobies on the Galapagos Islands show off their unusual feet.

Boobies spend most of their time flying over water, visiting land only to breed. During breeding season, they gather in large colonies near island shores or on cliffs along the mainland. They build their nests from twigs and seaweed, or simply dig a shallow hole in the ground.

Boobies are excellent divers, plunging from as high as 320 feet (100 m) to catch fish. They fold in their wings just before hitting the water and chase after prey, propelling themselves underwater with their wings and webbed feet. Blue-footed boobies fly and hunt in groups, diving together after one bird gives a whistling signal.

Types of Boobies

The brown booby has dark brown feathers on its head and back, with white on its belly and the underside of each wing. The red-footed booby is the smallest species.

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Where do black bears live?

WILD ANIMALS

1. North America
2. Europe
3. Asia

Illustration: Gary Fields

©1996 Nintendo

Black Bears

Even though they belong to the same genus and species, not all North American black bears are black!

1 Black bears live in North America.

© Moxon / Sunset

North American black bears live in wooded areas of North America. In the U.S., you'll find them in northern California, the Great Lakes region, New York, New England, the Appalachians, and even in parts of Florida.

North American black bears are found all over North America, from northern Mexico to British Columbia in Canada, and from California to the Appalachian Mountains and even parts of Florida. Their color varies almost as much as their habitat. The Cinnamon bear subspecies, found in northern California, has a reddish brown coat. The Kermodes bear, found in British Columbia, is considered a black bear even though its coat can be pure white!

Life in the Woods

Black bears live in wooded areas where they find plenty to eat. Berries, nuts, and tender young plants are their favorite foods, but sometimes they eat fish or the remains of dead animals. In the east, females weigh about 200 pounds (90 kg) and males about 250 pounds (112.5 kg). Western bears are smaller. The largest black bear ever found was a 600-pound (272 kg) male.

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What color is a squirrel monkey?

WILD ANIMALS

1. Black
2. Gray
3. Yellow

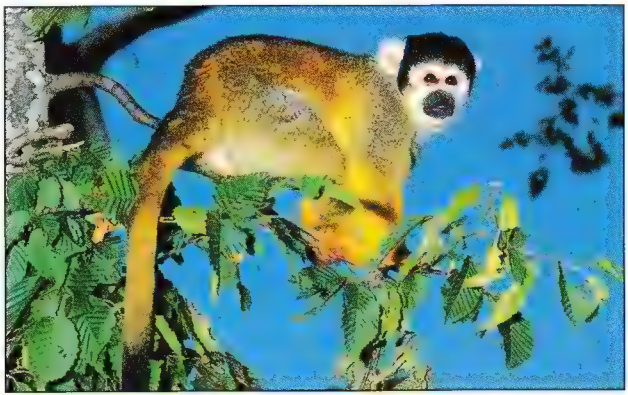
Illustration: Gary Fields

©1996 Nintendo

Squirrel Monkeys

Cute, colorful squirrel monkeys live in the tropical forests of Central and South America. They are an endangered species.

3 **Squirrel monkeys have yellow or yellow-green body fur.**



© G. Lacz / Sunset

Squirrel monkeys are easy to recognize because of their unusual coloring—yellow or yellow-green body fur; white face, throat and ears; and black at the top of the head, the muzzle and the tip of the tail.

Squirrel monkeys are well adapted for life in the trees. They're small and light—males weigh about 2.4 pounds (1.1 kg) and females about 1.5 pounds (.7 kg)—so they can rest in the highest branches without falling through. Their long tails—which can measure as much as 18.6 inches (46.5 cm) on a male squirrel monkey and 18 inches (44.5 cm) on a female—help them swing and climb from branch to branch. Trees also provide their food—fruits, seeds, and lots of insects. And living high in the trees protects the little squirrel monkeys from predators that might try to eat them, and from poachers who hunt them.

Shy but Sociable

Squirrel monkeys are shy—they'd run away if they saw anything as big as a human coming toward them. But they're very social. They usually live in groups of 30 or 40, swinging and playing in the trees.

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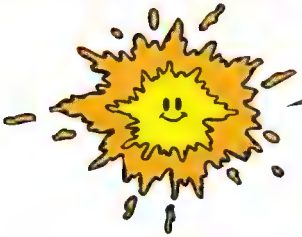
What type of animal is an aye-aye?

WILD ANIMALS



1. Monkey
2. Lemur
3. Sea Anemone

Illustration Gary Fields

©1996 Nintendo

Aye-aye

The aye-aye gets its name from the squeaking sound it makes. Aye-ayes are lemurs—cousins of primates.

2 An aye-aye is a lemur.

© S.T.F. / Sunset

Aye-ayes are an endangered species. Some people believe they bring bad luck, so they kill aye-ayes on sight.

The aye-aye is a strange looking creature, with thick, dark brown fur and a long bushy tail; large, round, hairless ears and gaping eyes. Its full body length—head to tail—is about 32 inches (80 cm), and it weighs about 6.6 pounds (3 kg). Its most unusual features are its hands, which have extra-long, thin middle fingers with long claws on the tips. The aye-aye uses this finger to search for food, sticking it deep into holes made by wood-boring insects and scraping out the insect larvae to eat. When it walks on the ground, the aye-aye keeps its middle fingers raised in the air so they don't get in its way.

Creature of the Night

Aye-ayes are found only in Madagascar, an island off the coast of Africa. They're nocturnal—which means they hunt for food at night-and they usually travel alone. During the day, aye-ayes sleep in nests high in the trees. They eat insects and fruit, which they tear open with their sharp teeth before scraping out the flesh with their bony fingers.

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Do all starfish have the same number of arms?

WILD ANIMALS

1. Yes, all starfish have five arms.
2. No, different species have different numbers of arms.

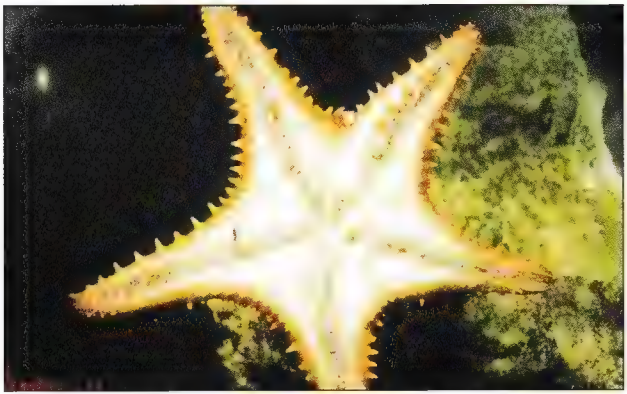
Illustration Gary Fields

©1996 Nintendo

Starfish

The Heliaster starfish can have as many as 50 arms. It's usually found in the waters of Central America.

2 Many starfish have five arms, but some have many more.



© G. Lacz / Sunset

The starfish has a mouth in the center of its body. When it eats, it covers its prey with its body and extends its stomach through its mouth to gobble up the food.

Most starfish do have five arms. That's how they got their name. But there are about 1,800 species of starfish in the world's oceans, and they come in all shapes and sizes. One group of starfish are known as the sun stars because their many rays resemble the rays of the sun. The Solaster starfish, which is found in the north Pacific, usually has about 10 rays and a sunburst pattern in its center. The Sunflower starfish, which lives off the Pacific coast of the United States, usually has between 15 and 24 arms and measures about 2 feet (60 cm) across.

Lend an Arm

Starfish arms are hollow, and covered with tiny spines. The undersides have grooves and tube feet, which the starfish uses to help it move and grab onto rocks and other surfaces beneath the ocean. Sometimes the ends of the arms have pincers. If a starfish loses an arm, another one will grow in its place.

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What is a sow bug?

WILD ANIMALS

1. An insect
2. A crustacean
3. A mammal

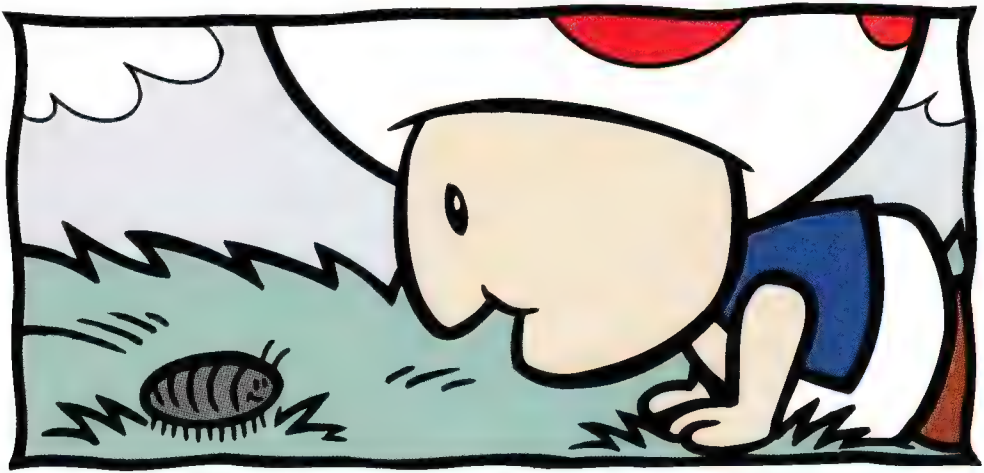

Illustration Gary Fields

©1996 Nintendo

Sow Bug

The sow bug, or wood louse, is an unusual sort of crustacean because it lives on land. It makes its home in dark, moist places such as in cellars, fallen tree trunks, and under rocks.

2 The sow bug, or wood louse, is a crustacean.

© Goergbreuck / Sunset

Sow bugs or wood lice are flat and gray. When they're threatened, they roll up into little balls to protect themselves.

There are more than 31,000 different species of crustacean. The ones we know best are shellfish—crabs, lobsters, shrimp, and crayfish. All of them have hard outer shells, or exoskeletons, made of a flexible protective substance called chitin. Most crustaceans have two pairs of antennae and several pairs of legs. Shellfish and most other crustaceans, like barnacles and water fleas, live in the water. But the sow bug is different.

Land-Based Crustaceans

The sow bug belongs to the order Isopoda. Like other Isopods, sow bugs are gray and flat. They're usually less than an inch long (2 cm). When threatened, sow bugs have a unique way of defending themselves. They roll up into a ball, shielded by their exoskeleton. Sow bugs feed on decomposing plant and animal matter. They are found all over the world.

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Are spider bites dangerous to humans?

WILD ANIMALS

1 No, that's an old wives' tale.

2 Yes, some spider bites can be dangerous to humans.

Illustration Gary Fields

©1996 Nintendo

Spider Bites

Almost all spiders are venomous. They use their venom to kill or digest their prey. Most spider venom is not dangerous to humans, but some is.

2 Yes, certain spiders can be dangerous to man.

© Goetgheluck / Sunset

It's hard for immunologists to develop treatments for spider bites because victims rarely catch the spiders that bit them. Antidotes, called antivenins, for brown recluse and the Australian funnel weaver bites are available.

A spider's venom is a kind of digestive juice that breaks down prey so the spider can eat it. Usually, the enzymes in the venom act only on the prey, but some venoms are like defensive weapons that a spider uses against enemies—like humans.

Black Widow

The venom of a black widow spider can be toxic, or poisonous, to humans. Although it rarely causes death, the bite of a black widow releases a neurotoxin—a toxin that affects the nervous system—which causes muscle cramps, severe pain, and sometimes paralysis. Black widows are found all over the world. They're easy to identify, with a glossy black body and a red hourglass-shaped spot on the abdomen.

The bite of the brown recluse spider of South America kills the body tissue around it. The Australian funnel weaver is also known to have a toxic—sometimes deadly—bite.

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Which are the largest spiders?

WILD ANIMALS

1. Daddy Longlegs
2. Crab spiders
3. Tarantulas

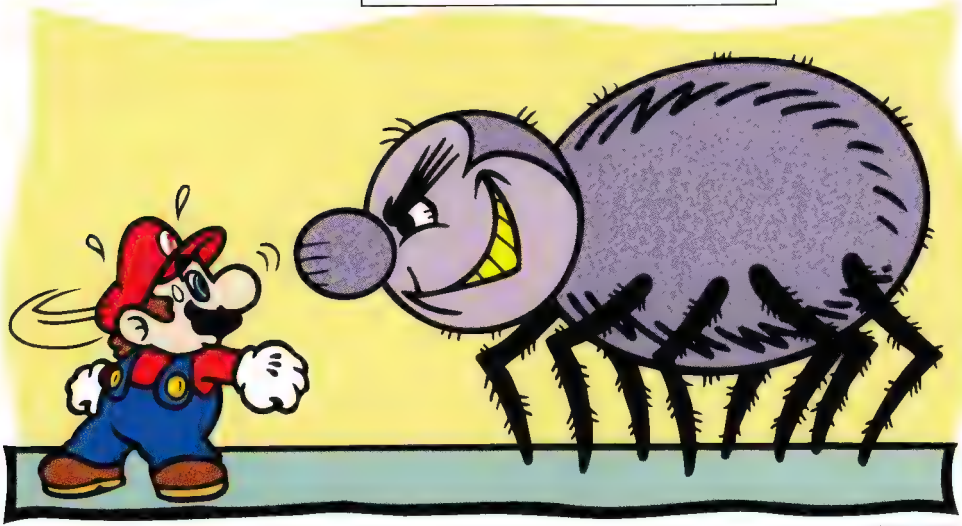

Illustration: Gary Fields

©1996 Nintendo

Tarantula

The first thing you notice about a tarantula is its hairy legs and body. Tarantulas are covered with brown or red bristly hairs.

3 Tarantulas are the largest spiders.

© G. Lacz / Sunset

People used to believe that a tarantula bite was fatal. The only way to treat it was by dancing wildly and perspiring so that the venom left the body. This isn't true, but the superstition lives on in a lively Italian folk dance called the "tarantella."

A tarantula's mouth opens up and down—like yours—but other spiders' mouths open sideways. Tarantulas use their powerful jaws to attack prey or to burrow into the ground where they live. After it digs its burrow, it spins a silky web to line the walls.

Big and Hungry

There are about 1,500 species of tarantula, 30 in North America. Tarantulas can grow to be 7 inches (18 cm) long. The biggest of the bunch, the Guyanese Bird Spider which lives in South America, can be 10 inches (25 cm) long. Guyanese Bird Spiders got their name because they do, on occasion, eat birds. Large tarantulas also eat frogs, lizards, mice and snakes. Smaller tarantulas feed on insects. A tarantula pounces on its prey and injects it with venom which paralyzes or kills the victim. Sometimes, the venom turns the victim's insides to liquid, which the tarantula sucks out.

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Where do gibbons live?

WILD ANIMALS

1 North America

2 Eastern Europe

3 Southeast Asia

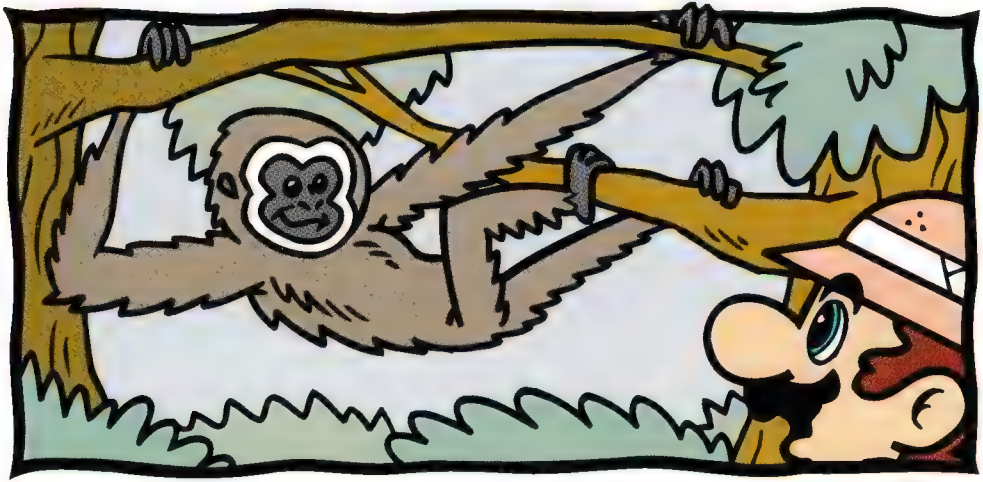

Illustration: Gary Fields

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Gibbons

These tree-dwelling primates use their long arms to swing from branch to branch. Animals that move in this way are called brachiators.

3 Gibbons live in Southeast Asia.

© G. Lacz / Sinset

Gibbons use their arms to swing from branch to branch. They live in the tropical rain forests of Southeast Asia and parts of India and China.

Gibbons like to "hang around" in lush tropical rain forests. They use their arms to propel them from branch to branch in a hand-over-hand manner. They dine on the fruits of the tropical trees—eating whatever is in season. Only one gibbon species, the pure black Kloss gibbon of Sumatra, eats some meat.

Simian Song

Gibbons also are known for their unusual songs. They don't just grunt or screech like other primates. Pairs of males and females actually sing together in a kind of duet. The songs identify a male and female that have paired off together, and they warn off other gibbons that might encroach on their territory.

Wild Life

Pairs of gibbons mate for life, producing babies every 2 or 3 years. In the wild, gibbons usually live about 25 years. Unfortunately, the destruction of the rain forests is wiping out gibbon habitats and gibbons themselves.

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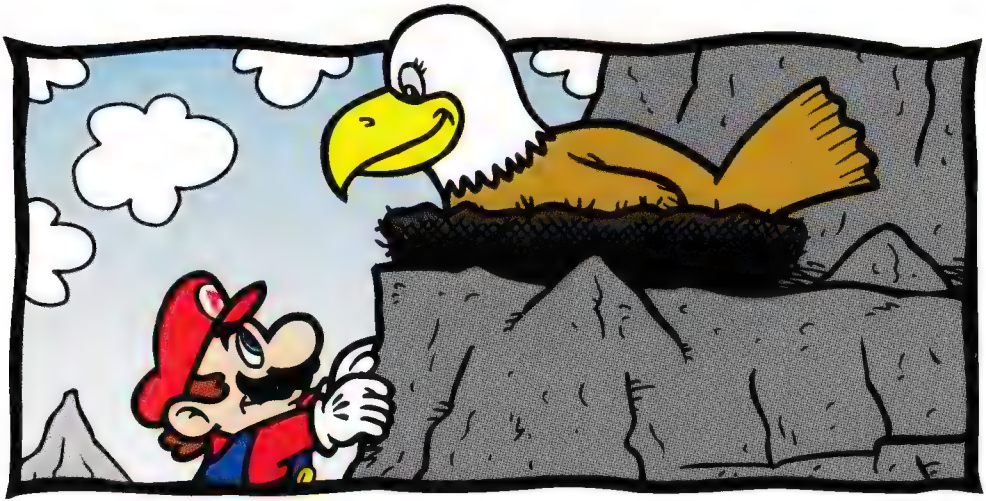
What is an eagle's nest called?

WILD ANIMALS

1. Aerie
2. Eaglery
3. Den



Illustration, Gary Fields

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Eagles

A pair of eagles returns to the same nest, or aerie, year after year. When they die, other eagles take over the abandoned nest. Some nesting sites have been used for hundreds of years!

1 An eagle's nest is called an aerie.

© NHPA / Sunset

Mother eagles hunt for the eaglets and bring food back to the nest. Eagles are predators. They eat small animals, other birds, and fish. Some species will eat sheep and small antelope.

It's important for aeries to be located in high places, like treetops and rocky cliff sides, far from predators. Baby eagles—eaglets—take a long time to mature. Until then, they're helpless and the aerie protects them.

Home Improvements

A pair of eagles stays together for several years. Each year when eagles return to their nests they fix or add to them. Imagine how big an eagle's nest can become over many years. One American bald eagle nest was reported to be 86 square feet (8 sq m)—about the size of a bedroom!

Steady Habits

The eagle's steady habits are a bonus for ornithologists (biologists who study birds). But it also means hunters who want to kill eagles always know where to find them. This poses a threat to the survival of the species.

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What do wasps eat?

WILD ANIMALS

1 Insects

2 Leaves

3 Pollen

Illustration: Gary Fields

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Wasps

A wasp stings to defend itself and to paralyze the insects it eats for food. Wasps may eat spiders, caterpillars, weevils, and grasshoppers.

1 Wasps eat other insects.

© G. Lacz / Sunset

Hornets are social wasps that build large, complex nests. They may nest under the eaves of buildings, in hollow trees, or even in abandoned underground animal burrows.

We know wasps as little fighters. Annoy them and they'll sting. If threatened, an entire colony may attack together. However, not all wasps sting, and in species that do, only females have stingers.

Wasp Life

Wasps are either solitary or social. Solitary wasps live alone. They build nests, lay eggs, pack the nest with food—usually live insects—then seal it. When the eggs hatch, they feed on the stored insects until they're strong enough to break out. Social wasps live in colonies headed by a queen. The queen's eggs hatch into workers who build the nest and keep the colony alive.

Insect Architects

Wasps are great builders. Paper wasps make beautiful, complex nests from chewed plant material that they form into paperlike strips. They glue the strips together to make nests in shapes such as cones and spheres.

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How do honeybees communicate with each other?

WILD ANIMALS

1 They sing

2 They dance

3 They chirp

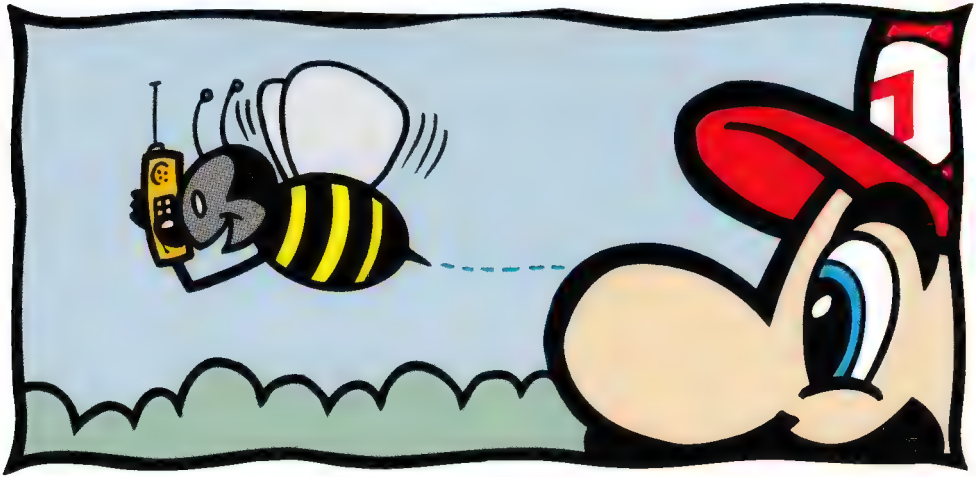

Illustration: Gary Fields

©1996 Nintendo

Honeybees

It's a worker bee's job to find nectar for the other bees in its hive. When it locates a nectar source, it returns to its hive to tell the others about it.

2 Honeybees dance to communicate with each other.

© Goetgheluck / Sunset

Honeybees need nectar to produce honey. Worker honeybees scout for nectar sources. When they find one, they do a dance to direct the others to the source.

The worker bee returns with a sample of the nectar. When the other bees taste or smell the nectar, they're eager to know where it came from. The bee directs them to it by dancing.

Dance Fever

The bee dances in a circle if the nectar is nearby. If the nectar is far away, or hard to reach, the bee does a "waggle" dance—shaking its body as if it were wagging its tail. The bee faces in the direction of the nectar source.

The length and intensity of the bee's dance tells the other bees how much nectar they can expect to find. The longer it dances, the more bees it attracts. So the longer it dances, the more nectar there is.

Learning the Language

Austrian zoologist Karl von Frisch was the first to study and interpret the honeybee dance. In 1973, he won the Nobel Prize for his work.

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Which sea creature has an electrical charge?

WILD ANIMALS

1. Eel
2. Sea horse
3. Shark

Illustration: Gary Fields

©1996 Nintendo

Eels

The electric eel may have the best defensive weapon of any creature on Earth. It can shock its enemies with a charge of as much as 650 volts!

1 **Eels are sea creatures that have an electrical charge.**

© Varin Visage / Jacana

Electric eels like this one can defend themselves by jolting predators with electric shocks.

There are hundreds of species of eel, but only electric eels carry an electrical charge. It's produced by electric plates that run along the eel's back, which are stimulated when the eel is excited or threatened.

Snaky Fish

All eels have the same body type. They're thin and long—sometimes as long as 10 feet (3 m)—with one continuous fin running lengthwise around their bodies. Eels live in rivers and seas all over the world. They're a common food fish in Japan and Europe.

Secret Missions

When American and European eels are about 10 years old, they begin the last journey of their lives, to the Sargasso Sea near Puerto Rico. There, in the dense seaweed, they mate and the females lay millions of eggs. Then the adults die. When baby eels—called elvers—hatch, they swim north to the Atlantic Ocean. The journey can take a year!

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What type of fish is commonly served pickled or kippered?

WILD ANIMALS

1 Carp

2 Herring

3 Trout

Illustration Gary Fields

©1996 Nintendo

Herring

Herring travel in huge groups, called schools, which may include millions of fish. They're a favorite food fish in Europe and North America.

2 Herring is served pickled or kippered.

© Animals Animals / Sunset

It's rare to see a silvery-skinned herring alone. They travel in huge schools that can number in the millions.

Millions of tons of herring are caught each year for human consumption. Herring fishing was such an important industry in Europe that the city of Hamburg, Germany, was founded as a port for herring boats.

Pickled herring, marinated in vinegar and spices, is a favorite Scandinavian dish. Kippered herring, or kippers, are dried, smoked herring. They're a traditional English dish. Baby herring is sometimes sold as sardines.

People aren't the only ones who eat herring. Sharks and sea birds love it. The birds swoop down from the sky to pluck the fish from the water.

Cold-water Fish

Herring live in cold saltwater. In the Atlantic Ocean, they're found from Cape Cod, Massachusetts, to Newfoundland, Canada, and throughout northern Europe. Another species lives in the north Pacific.

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Which animal is related to the rhinoceros?

WILD ANIMALS

1. Mandrill
2. Potto
3. Tapir

Illustration Gary Fields

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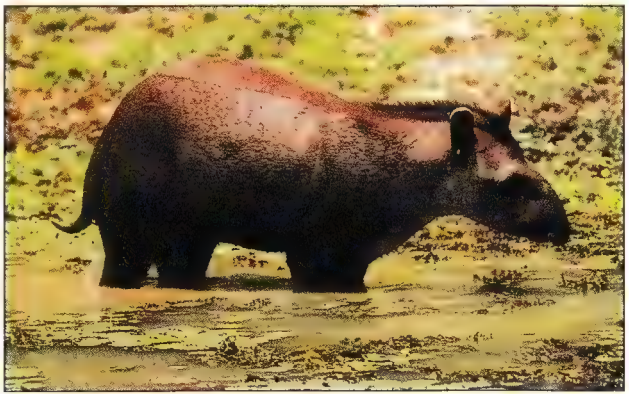
Tapirs

Tapirs live in hot, wet tropical regions. About 25 million years ago, tapirs lived all over the world.

3 The tapir is a mammal related to the rhinoceros.



© NHPA / Sunset

In South and Central America, people kill tapirs for food. This is one reason tapirs are in danger of becoming extinct. They are also threatened by the destruction of their natural habitat, the rain forest.

Zoologists aren't sure whether prehistoric tapirs died out in most ranges, or whether they migrated to warmer climates. Today tapirs are found in only two places on Earth—Central or South America and Malaysia.

Heavyweights

Tapirs have thick heavy bodies, about 6.6 feet (2 m) long and 3.3 feet (1 m) tall. They weigh as much as 660 pounds (300 kg). Tapirs spend most of their time on land, but they are excellent swimmers. Adult tapirs are dark brown or black, except for the Malayan or saddleback tapir which has a light gray back. Baby tapirs are born with light colored spots and stripes which gradually disappear as they mature.

Solitary Animals

Central American and Malayan tapirs live alone or in pairs in rain forests, where they feed on leaves, twigs, and fruit. Fur-covered mountain tapirs live in the northern Andes Mountains of South America.

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Are quills permanently attached to porcupines?

WILD ANIMALS

1. Yes, porcupines keep their quills throughout their lives.
2. No, porcupine quills detach easily.

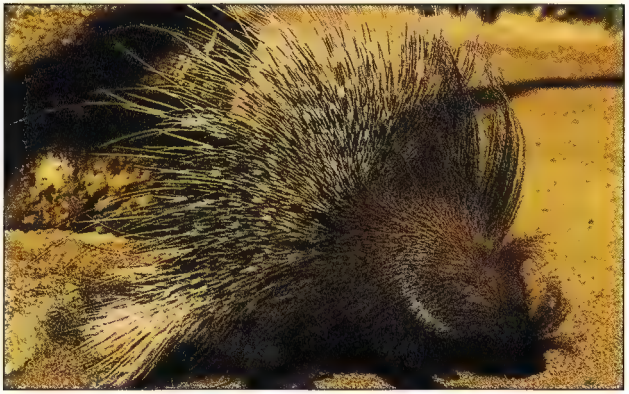
Illustration: Gary Fields

©1996 Nintendo

Porcupines

A porcupine is covered with bristles or quills. Using these natural weapons, it defends itself against predators—even lions and leopards!

2 Porcupine quills detach easily on contact.



© G. Lacz / Sunset

Old World porcupines, like this crested porcupine, live in Africa and Asia.

The crested porcupine of Africa and Asia, has long, black and white quills over the rear two-thirds of its body. It has a very short tail and can grow to be more than 32 inches (83 cm) long and to weigh 59 pounds (27 kg). New World porcupines, which live in North America and Europe, have long tails and are covered with short, brown bristles. They're usually smaller than crested porcupines.

Fighting Spirit

Even though they're small, porcupines can defend themselves against fierce predators. When a porcupine is threatened, it performs a sort of dance warning the predator to stay away. Smart predators pay attention! First the porcupine stamps its back feet, grunts, and rattles its quills. If the predator doesn't retreat, the porcupine turns its back and charges—backwards!—into the enemy. Its quills stick into the enemy's skin, causing pain and sometimes fatal infection.

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What is a caiman?

WILD ANIMALS

1. A reptile related to alligators
2. A mammal related to horses
3. An insect related to wasps

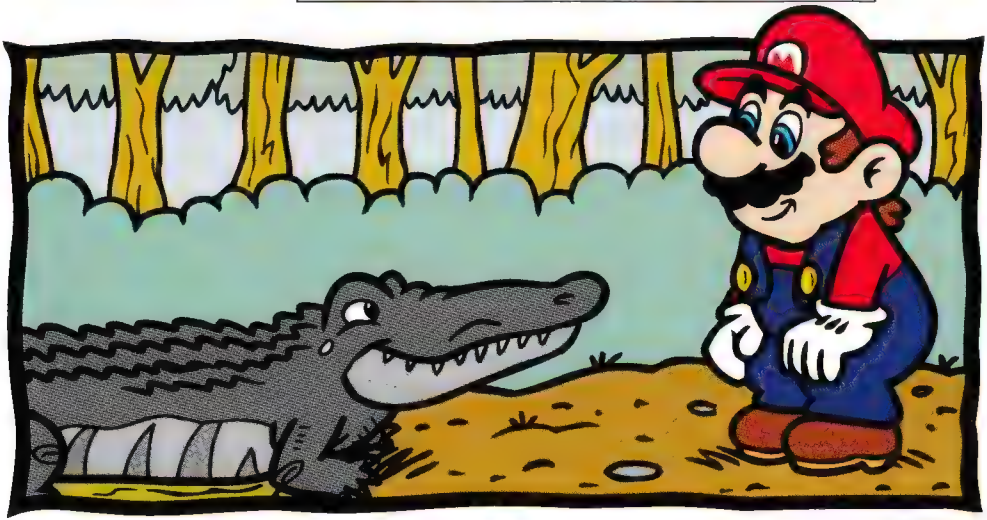

Illustration Gary Fields

©1996 Nintendo

Caiman

Caimans are found in the rivers of Central and South America. Some caiman species are almost extinct.

1 **A caiman is a reptile related to the alligator and crocodile.**

© Mc Haght-PHR / Jacana

On the menu for this broadnosed caiman: fish, frogs, lizards, and turtles.

Black caimans can grow up to 20 feet (6 m) long. They live in the Amazon River basin, swimming through swamps and rivers and feeding on fish, frogs, and other aquatic animals. Black caimans look like their crocodile cousins, but they're distinguished by their black skin. Unfortunately, the black caiman's skin also makes it a target for hunters who kill the animals for their hides. Today, black caimans are endangered.

Colorful Caimans

Broadnosed caimans are colorful crocodile cousins; olive green with tan markings. They grow to 5 to $6\frac{1}{2}$ feet long (1.5-2 m).

Like other reptiles, baby caimans hatch from eggs. Females lay the eggs in nests at the water's edge. When the babies are ready to hatch, they make a low growling or purring sound. The female cracks open the eggs and carries the newborn caimans to the water.

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What is a baby owl called?

WILD ANIMALS

1. Hooter
2. Kit
3. Owlet

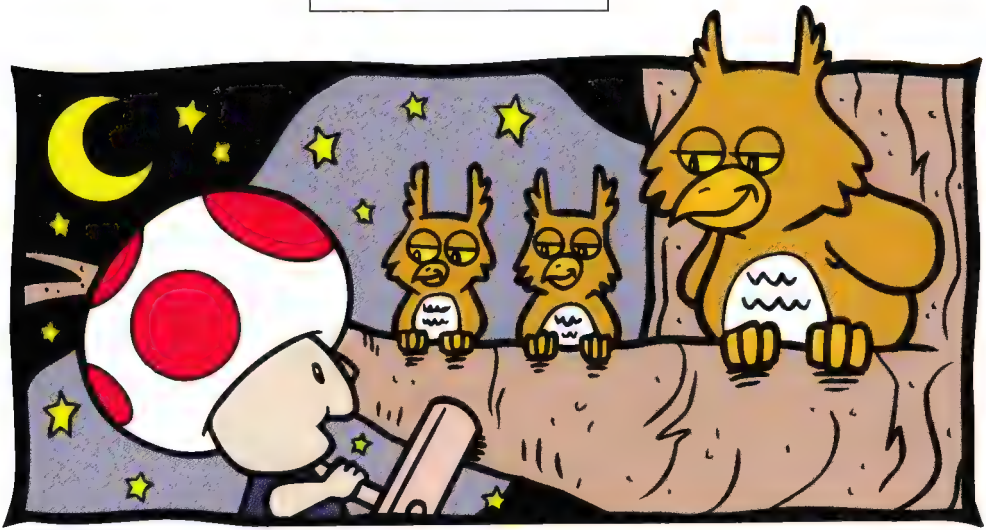

Illustration Gary Fields

©1996 Nintendo

Owls

Baby owls, or owlets, are born blind and helpless. They rely on their parents to feed and care for them until they leave the nest.

Unlike most birds, owls don't like to build nests. They prefer to take over nests that have been abandoned by other birds. Small species of owl slip into nests left by woodpeckers. Larger species look for nests left by crows or birds of prey. Some even take over underground burrows left by prairie dogs! If they can't find an empty nest, owls generally occupy hollow trees, eaves, or other quiet, out of the way spots.

3 A baby owl is called an owlet.

© P. Cabrol / Jacana

It takes owlets several months to leave the nest. Their hunting skills take a long time to develop. Adult owls, which generally live about 5 years, are excellent hunters.

Feeding Time

Female owls usually hunt for themselves, but when a female owl lays her eggs, she settles into the nest, and the male hunts for both of them. He leaves the nest at night and seeks out mice, lizards, and other small animals for food. Once the owlets are born, the male continues to handle the hunting. He returns to the nest with the prey and turns it over to the female. She tears it up into small pieces so the owlets can eat.

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Where do howler monkeys live?

WILD ANIMALS

1. Asia
2. Australia
3. South America

Illustration: Gary Fields

©1996 Nintendo

Howler Monkeys

These monkeys don't actually howl, they roar. And loud! They make the loudest noise of any animal on Earth.

3 Howler monkeys live in South America.

© NHPA / Sunset

Howler monkeys feed mainly on leaves and fruit, and they tend to spend most of their time in the trees.

You wouldn't know it to look at them, but howler monkeys make a noise like a runaway train. Their call is something like a roar that grows louder and more intense the longer it lasts. Despite their tremendous capacity for noise, howler monkeys are relatively small. The largest males only grow to be about 29 inches (72 cm) tall, and weigh about 14 pounds (6.5 kg). Depending on the species, their coats can be black or reddish-brown.

Most howler monkeys live in the rain forests of South America, but some species live as far north as Mexico.

Out of Their Trees

Howler monkeys use their calls to announce their location to other animals. Their cries serve as a warning for other animals, including other packs of howler monkeys, to stay away from their territory. This helps the monkeys avoid any fighting that might occur if two groups were to try to claim the same territory.

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Where do swallows spend the winter?

WILD ANIMALS

1. They hibernate in caves
2. They migrate to warm regions
3. They remain in their nests

Illustration, Gary Fields

©1996 Nintendo

Swallows

Legend has it that the swallows that nest at the Mission of San Juan Capistrano in California leave each year on October 23, St. John's Day and return on March 19, St. Joseph's Day.

2 Swallows migrate to warm regions.

© N.H.P.A./Sunset

Swallows grow to be 8 inches (20 cm) long at most. Some types of swallows are easy to recognize because of their sharply pointed wings and forked tails.

The legend of the swallows at San Juan Capistrano isn't completely accurate. The dates change depending on the weather—if it's warm in the autumn, the swallows might leave later. However it is true that swallows return year after year to their favorite nesting sites.

Avian Architects

Swallows are known for their nest-building skill. These delicate little birds craft sturdy nests from twigs and grasses held together with mud. The damp mud is used to stick the nest to overhangs on cliffs or buildings. When it dries, the mud forms a protective shield. Cliff swallows, the type of swallows that live at San Juan Capistrano, build their nests entirely of mud pellets. Male and female swallows work together to build their nests. Choosing sites that are partially hidden by rocks or eaves helps protect the baby birds in the nest from predators.

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Which shellfish has a fan-shaped shell?

WILD ANIMALS

1 Clam

2 Conch

3 Scallop

Illustration: Gary Fields

©1996 Nintendo

Scallops

There are two types of scallop: bay scallops and sea scallops. Bay scallops are smaller and have coarsely ridged shells. Sea scallops are large and have finely ridged shells.

3 A scallop has a fan-shaped shell.

© N.H.P.A./Sunset

Scallops are bivalves. Their shells are made of two hinged parts.

Scallops are mollusks—soft-bodied animals protected by hard outer shells. They also are bivalves, which means that their shells consist of two hinged parts. The two halves of the scallop shell are connected by a strong muscle called the adductor muscle. This muscle is the part of the scallop that people eat.

Mature scallops can move around by contracting, or tensing, the adductor muscle to create a type of jet propulsion.

Seafood Specialty

Bay scallops are found in waters from the Gulf of Mexico to Cape Cod, Massachusetts. They're about 3 inches (7.5 cm) across and their edible portion is about 1/2 inch (1.25 cm) around.

Sea scallops are found in colder northern waters. They're about 8 inches (20 cm) across and their edible portion is about 1 1/2 inches (3.75 cm) around.

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Which sea creature is also known as a torpedo?

WILD ANIMALS

1 Electric Ray

2 Mako Shark

3 Needlefish

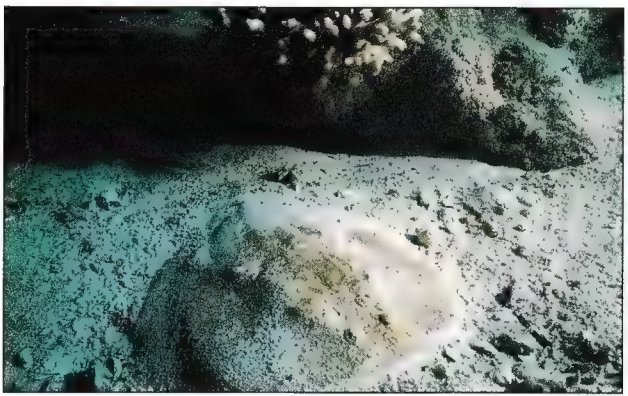
Illustration Gary Fields

©1996 Nintendo

Electric Ray

This sea creature captures its prey by zapping it with an electrical charge of 200 volts.

1 **The electric ray is also known as a torpedo.**



© Animals Animals / Sunset

You might not even notice a muddy brown electric ray hanging around on the ocean floor.

From a distance, electric rays look like lumps of mud on the ocean floor. Their muddy coloring serves as camouflage as they cruise along the sea bottom. Electric rays move slowly. Often they simply sit in one spot. They're perfectly harmless, unless an unsuspecting sea creature happens to touch them.

Shock Value

On either side of the electric ray's head are areas of specialized muscle tissue that carry an electric charge. When the ray is disturbed, it gives off a powerful shock that stuns or even kills the offending fish. The electric ray's shock is powerful enough to knock out a human.

The electric shock is useful for capturing prey and for defending the ray against predators.

Electric rays live in warm waters. They range in length from about 1 foot (30 cm) to 6 feet (2 m).

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Why is the angel shark unusual?

WILD ANIMALS

1. It is pure white in color.
2. It can fly.
3. It burrows into the sea bed.

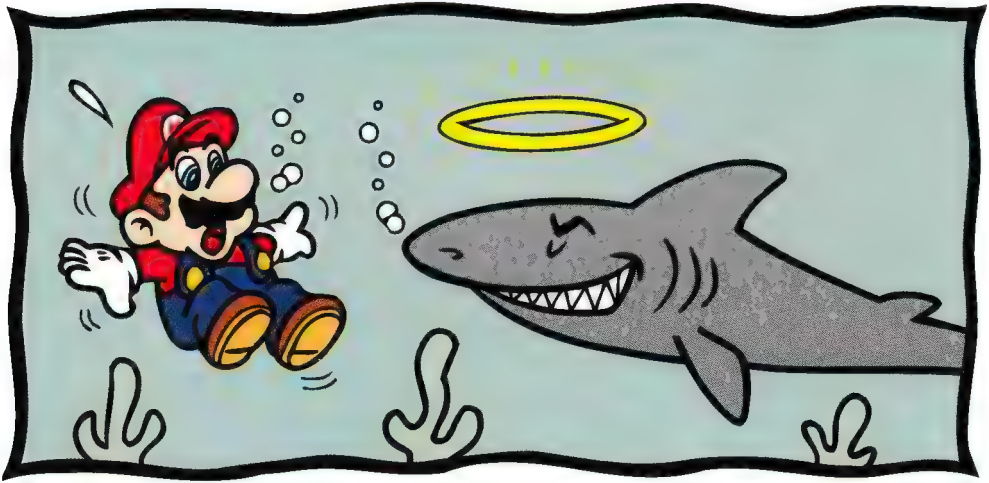

Illustration: Gary Fields

©1996 Nintendo

Angel Shark

This unusual fish doesn't look like a typical shark. Yet, like all sharks, the angel shark is carnivorous. It feeds on other animals.

3 The angel shark burrows into the sea bed.

© J. L. Dubois / Explorer

An angel shark's coloring helps it blend in with muddy or sandy sea beds. Angel sharks usually live in the Mediterranean and eastern Atlantic Ocean.

With its flat body and very wide head, the angel shark resembles a ray more than it does a shark. Marine biologists and ichthyologists (scientists who study fish) believe the angel shark developed its unique body because it lives on the ocean floor. Unlike many sharks which swim constantly, the angel shark can remain in one place on the ocean floor. Often it hides by burrowing into the sandy bottom and then springs out to capture its prey.

Angel sharks can grow to be 6 1/2 feet (2 m) long and can weigh as much as 154 pounds (70 kg).

Big Bites

Like other members of the shark family, angel sharks have six or seven rows of super-sharp teeth. Usually only the first row is used. Eventually the teeth in the first row fall out and the ones behind then move up to replace them.

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What type of creature is the spotted dogfish?

WILD ANIMALS

1. Shark
2. Skate
3. Whale

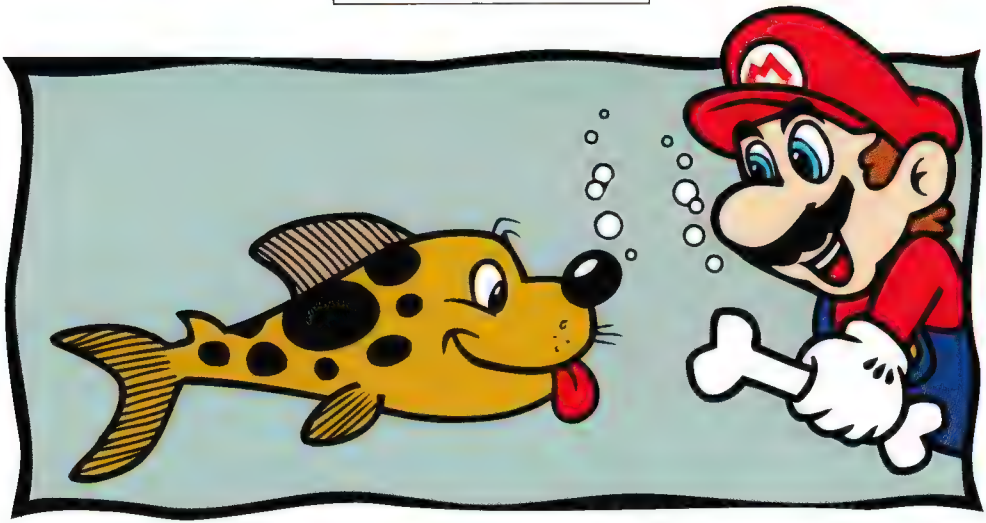

Illustration Gary Fields

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Dogfish

There are three types of dogfish: spotted, spiny, and smooth. All three travel in huge groups, called schools, gobbling up all the fish and sea animals they can.

1 The spotted dogfish is a shark.

© B. Jozedupont / Jacana

The spotted dogfish lives in the cooler waters of the northern Atlantic and Pacific oceans.

Fishermen don't like dogfish for several reasons. First, the dogfish prey on food fish like mackerel, which the fishermen are trying to catch. When dogfish aren't eating the fishermen's fish, they're eating through their nets. Worst of all, when dogfish get caught in the nets they put up a tough fight. The spiny dogfish is even equipped with sharp spines that secrete a painful venom. No wonder fishermen don't like to mess with these scrappy little sharks!

No Bark, Nasty Bite

Dogfish are among the smallest sharks. They commonly grow to be 2 to 4 feet long (60-120 cm). They can be as little as 1 foot (30 cm) or as large as 5 feet (150 cm). Spiny dogfish are gray with white spots. The smooth dogfish is gray and the spotted dogfish has brown spots. All three are found in the northern Atlantic and Pacific oceans.

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Can crocodiles run?

WILD ANIMALS

1 Yes, they can run 20 miles per hour (12.4 km/h).

2 No, crocodiles can't run.

Illustration, Gary Fields

©1997 Nintendo

Crocodiles

On land, crocodiles can't move very fast. They can walk and they can trot, but they can't run at full speed.

2 Crocodiles can't run on land.

© Animals Animals / Sunset

Crocodiles can walk on land, but they move much faster when they're swimming in the water.

With their heavy bodies and short legs, crocodiles are not built for speed on land. Some of them—usually the younger, lighter ones—can move as fast as a trot or fast walk. Most of the time, crocodiles move on land by wriggling on their bellies. They leave the water mainly to bask in the warmth of the sun.

Strong Swimmers

In the water, however, crocodiles move quickly. They slither through the water with snakelike movements of their bodies, or they stroke their powerful, muscular tails from side to side to propel them. Crocodiles are also known for their ability to float soundlessly in the water, lying in wait for prey. When they float, crocodiles submerge their entire bodies, leaving only their eyes, ears, and nostrils above the surface of the water.

They're great underwater swimmers, too. A crocodile can remain underwater for more than one hour without coming up for air.

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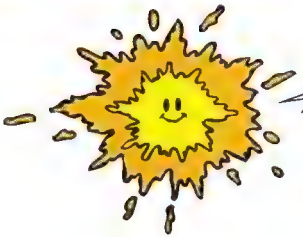
What do sea gulls eat?

WILD ANIMALS



1. Fish
2. Plants
3. Just about anything

Illustration Gary Fields

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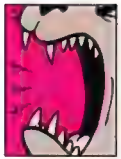
Sea Gulls

These large, tough birds adapt easily to different environments, because they can live on just about any edible materials available.

3 Sea gulls eat just about anything.



© S. I. I. / Sunset

Sea gulls aren't picky about what they eat. You'll often see them hovering over garbage dumps and landfills.

As their name implies, you'll usually find sea gulls living near the shore. Yet sea gulls can also be seen far inland, miles from shore. They simply head to where the food is.

When they're living at the beach, sea gulls generally catch fish to eat. They may also pick up clams and mussels and drop them onto rocks or pavement to smash their shells and to get at the meat. But they're just as happy scrounging for dead animals or picking up garbage from dumpsters and landfills. If they can't find anything of their own to eat, sea gulls will steal food from other birds.

By the Sea

There are 43 species of gulls and terns. Most are white or gray, and some have black or brown markings. Although they may stray far from shore, sea gulls generally live near the water, building nests from stones, shells, seaweed, and other scraps.

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How are turtles born?

WILD ANIMALS

1. They hatch from eggs
2. They're incubated in the mother's pouch
3. They are born fully formed underwater

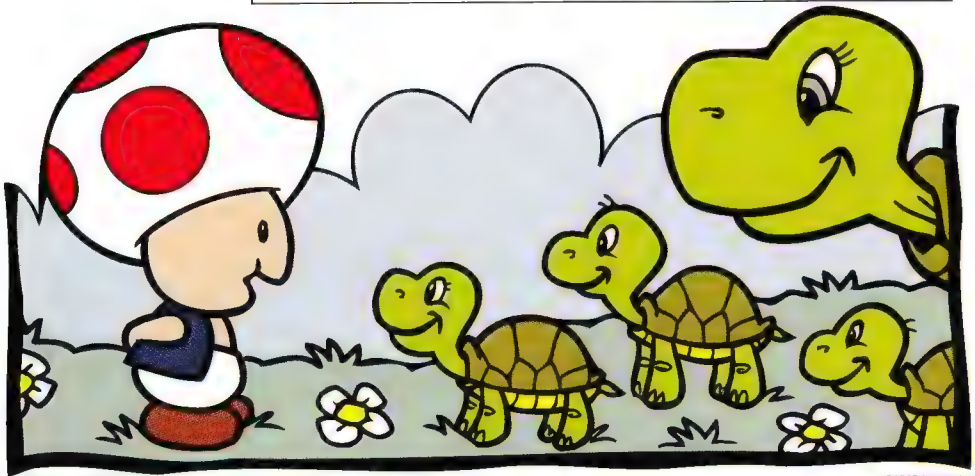

Illustration: Gary Fields

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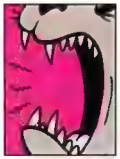
Turtles

Though turtles live almost exclusively in the water, female turtles lay their eggs on land. One female may lay 100 eggs at a time.

1 Turtles hatch from eggs.



© NHPA / Sunset

The location of a turtle's nest can determine the gender of the babies. A nest in a warm area near the water usually produces females. A partly shaded nest away from the water produces males and females. A cool nest far from the water produces males.

A female turtle usually emerges from the water at night to lay her eggs. She buries them in the sand, where they are kept warm and protected from water, wind, and predators. Once the eggs have been laid, the mother simply returns to the sea and lets them fend for themselves.

First Swim

When the baby turtles are born they immediately and instinctually head for the water. That first journey to the sea can be the most dangerous trip of a turtle's life. The babies are weak and vulnerable—easy targets for predators like birds.

The babies that make it to the water seem to disappear. Scientists are still trying to discover where they go and how they live, since their parents are not on hand to teach them how to find food and protect themselves. They might go into hiding and emerge again in about a year later.

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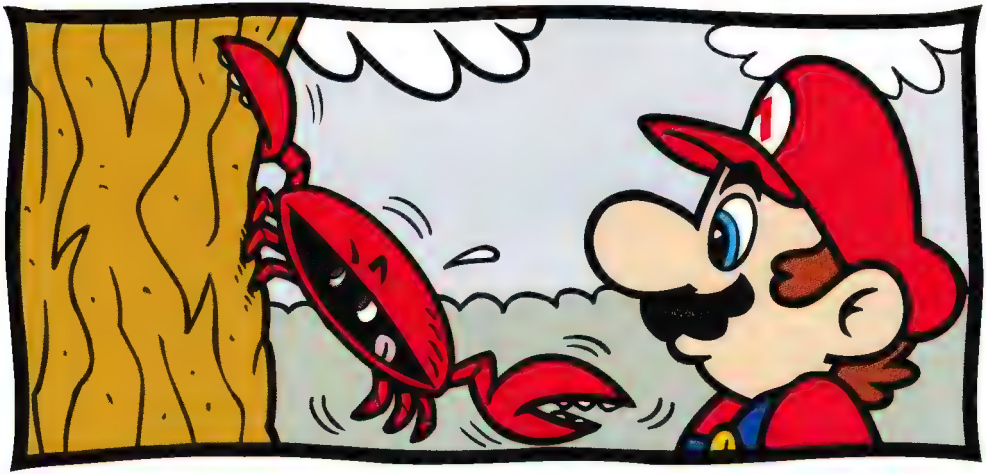
Can crabs climb trees?

WILD ANIMALS

1 Yes, some crabs climb trees.

2 No, crabs cannot climb trees.



Illustration, Gary Fields

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Crabs

Most crabs crawl on land and swim in the water, but the robber crab, which lives in the Pacific islands, actually climbs trees!

1 Some crabs can climb trees.

© ANT, Sunset

A crab's front two legs are the claws, or pincers, it uses to defend itself.

Robber crabs, or coconut crabs, climb up the trunks of coconut palm trees to cut down coconuts to eat. Using its powerful claws, the robber crab breaks through the hard outer shell of the coconut to get at the meat inside. The claws are also a weapon. They're strong enough to chop off the fingers of any humans who try to catch the crab.

A Hermit's Life

All crabs are crustaceans, which means they are born with hard outer shells. And they are decapods, which means they have five pairs of legs. The front legs are claws called pincers. The back legs are like fins for swimming. The crab uses its other legs for walking.

There are two groups of crab: true crabs and hermit crabs. Hermit crabs shed their shells and then take over the shells of other crustaceans. As the crab grows, it changes its shell. Some tropical hermit crabs live on land, but return to the water to breed.

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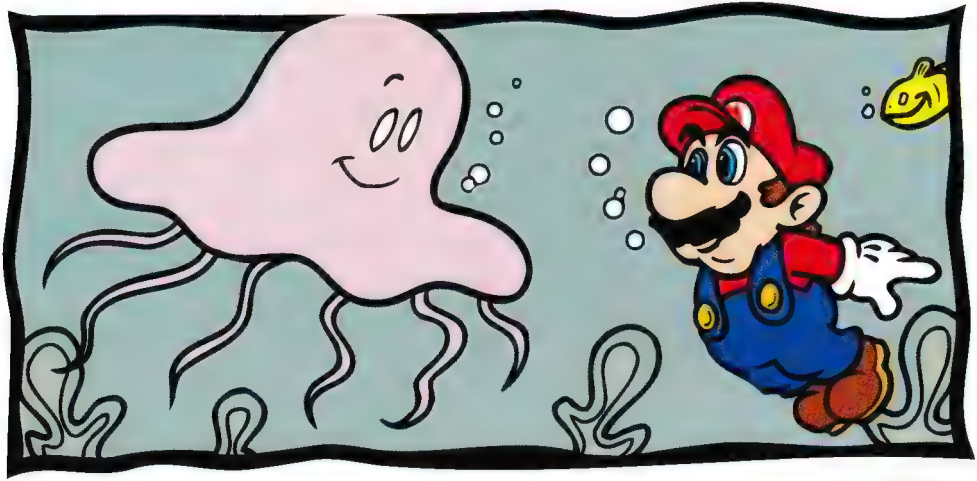
Where do jellyfish live?

WILD ANIMALS

1. Saltwater
2. Freshwater
3. Both saltwater and freshwater.



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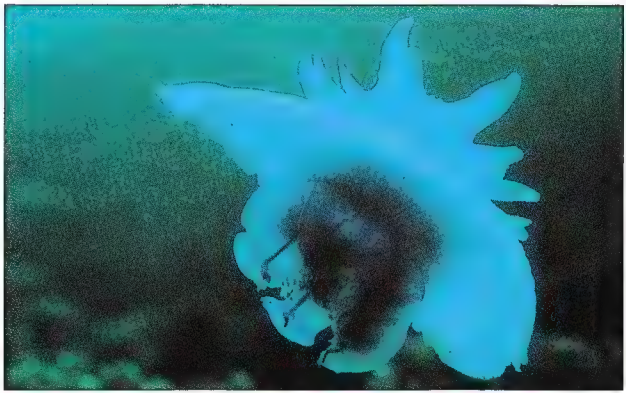
Jellyfish

With no skeleton and a body composed almost entirely of water, a jellyfish is a strange-looking creature.

3 Jellyfish live in both saltwater and freshwater.



© Animals Animals / Sunset

Though there are some small jellyfish that live in freshwater, most jellyfish live in the ocean. A jellyfish may be brown, pink, white, or blue.

Jellyfish can be as small as a coin or they can be enormous. Some grow to be over 100 feet (300 m) long. The jellyfish body is shaped like a sac or umbrella. Extending from the body are long stringy tentacles, as few as 50 or as many as 500.

Don't Get Stung!

The jellyfish uses its tentacles to sting its prey. Each tentacle carries stinging cells with poison that paralyzes small sea animals like shrimp and fish. Tiny jellyfish capture microscopic water organisms in a similar way. Once it has subdued its prey, the jellyfish sucks it into the sac where the prey is digested.

Usually, jellyfish swim or float near the surface of the water. Their sting can be dangerous to human swimmers.

Among the most dangerous jellyfish are sea wasps, which live mainly in the South Pacific, near Australia. Their sting is so potent it can kill a human.

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How does a boa constrictor kill its prey?

WILD ANIMALS

1. It injects prey with venom.
2. It bites through the animal's neck.
3. It wraps itself around the animal's body and squeezes.

Illustration Gary Fields

©1997 Nintendo

Boa Constrictor

Huge snakes known as boa constrictors are found mainly in Central and South America and in the West Indies.

3 **A boa constrictor wraps itself around the body of its prey and squeezes.**

© Sunset

Though a boa constrictor squeezes its prey, it doesn't break the animal's bones. It kills the prey by suffocating it.

Boa constrictors generally grow to be about 10 feet (3 m) long, and the bodies of most species are silvery gray or tan. There are exceptions, however, such as the Emerald Tree Boa, which is bright green, and the Rainbow Boa, which has a reddish-brown or orange body.

Chowing Down

Boas have big appetites. They usually feed on small animals, like rats or rabbits, or on large birds. The boa uses its jaws to grab and hold its prey. Then the snake coils around the prey and squeezes until the animal suffocates.

Then the boa dislocates its jaws to open them wide and it begins to swallow the prey, head first and whole. Boas have teeth, but they're not used for chewing. Their main function is to force the food down the snake's throat. The snake's body stretches to accommodate the animal. Muscles in the snake's body force the food along. It takes several days for the prey to be digested.

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Do lizards shed their skins?

WILD ANIMALS

1 Yes

2 No

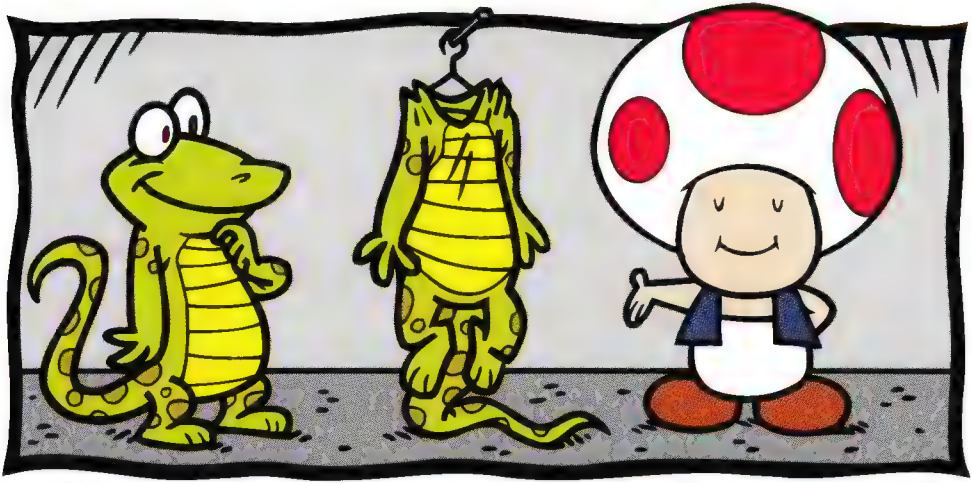

Illustration. Gary Fields

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Lizards

Like their reptile relatives, snakes, lizards periodically shed their skins.

1 Yes, lizards shed their skins.

© Sunset

In warm regions, lizards may be active all year round. In regions with cold winters, lizards hide for the winter and reappear when the weather turns warm again.

Lizards are usually dormant, or inactive, during the winter. They hide under rocks, wriggle beneath tree bark, or crawl into underbrush. Since lizards, like other reptiles, are cold-blooded, they prefer to be active only in warm weather. Once spring arrives, they come out from their hiding places.

Shedding Skin

The process of shedding skin, hair, or feathers and regenerating a new outer covering is called molting. In addition to reptiles, birds, amphibians, and some mammals do it. In some species of lizard, molting occurs continuously, in others molting occurs seasonally.

A lizard's skin has six layers. During molting, part of the outer layer of skin flakes off. The skin may be shed scale by scale or it may come off in patches.

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What type of animal is an anaconda?

WILD ANIMALS

1 Bear

2 Bird

3 Snake

Illustration: Gary Fields

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Anaconda

The anaconda is sometimes known as a water boa. Like its relative, the boa constrictor, the anaconda kills prey by squeezing it to death.

3 An anaconda is a snake.

© Sunset

Anacondas are semi-aquatic—they live in and out of the water.

The green anaconda is the largest snake in the world. It can grow to be 25 feet (7.6 m) long, and it's been known to feed on small deer, wild boars, monkeys, or goats. The yellow anaconda is smaller. It grows to be about 10 feet (3 m) long, and it generally feeds on rodents and small birds.

Big Appetites

Anacondas live in tropical regions of Central and South America. They spend part of their time in the water.

An anaconda usually lies in wait for its prey, then it strikes by raising its head and grabbing the animal in its mouth. At the same time, the snake coils itself around the animal once or twice. As the animal struggles, the snake coils tighter. Eventually, the animal suffocates.

Anacondas always swallow prey whole. It takes several days for the snake to digest a whole animal.

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Which bird is known for its colorful bill?

WILD ANIMALS

1. Hawk
2. Robin
3. Toucan

Illustration, Gary Fields

©1997 Nintendo

Toucan

A toucan's bill can grow to be so large that it's about one-third of the bird's whole body length. Though the bill looks heavy and strong, it's really delicate and breaks easily.

3 The toucan is known for its colorful bill.

© Sunset

Toucans use their big beaks to pluck small fruit from tree branches.

Toucans use their bills to pluck berries and seeds from tree branches. Holding a berry at the tip of its bill, the toucan tosses back its head to throw the berry down its throat. When there aren't enough berries or seeds around, toucans have been known to eat insects and small lizards. They even raid the nests of other birds to eat their eggs and their young.

Show Your Colors

The most noticeable feature of a toucan's bill is its coloring. The keel-billed toucan's bill has almost all the colors of the rainbow. Other species have bills in sunset shades of golden yellow and orange.

Most toucans have black feathers—some with splashes of red, yellow, or white. A few species have green or blue feathers.

Toucans live in rain forests and wooded areas of Central and South America.

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What do buffalo eat?

WILD ANIMALS

1 Grass

2 Meat

3 Both

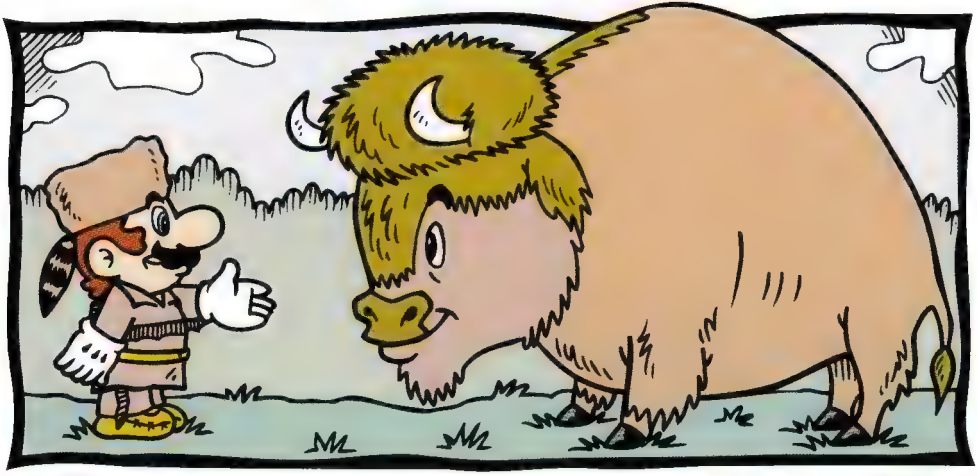

Illustration Gary Fields

©1997 Nintendo

Buffalo

Like other animals in the Bovine family, including cows, buffalo are grazers and ruminants. They feed on grass, which they chew, swallow, and regurgitate to chew again.

1 Buffalo eat grass.

© G. Lacz / Sunset

The African buffalo is easy to recognize because of its distinctive curved horns.

The animals we know as American buffalo are incorrectly named. They're really bison, which are related to buffalo. True buffalo belong to two species: the African or cape buffalo and the Asian water buffalo.

Buffalo Life

Most buffalo have been domesticated. They're raised for food, and also as work animals. In the wild, buffalo live a leisurely life. Most of their time is spent looking for grassy lands on which to graze. They do this by sniffing out sweet-smelling new grass. The rest of the time is spent trying to stay cool and safe from insects and predators.

Water buffalo got their name from their habit of wallowing in pools to stay cool. In some places, water buffalo are nocturnal animals. They are sedentary in shady spots during the day and they come out to feed in the cool of the evening.

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How big can squirrels grow?

WILD ANIMALS

1. 1 foot (30 cm)
2. 2 feet (60 cm)
3. 3 feet (90 cm)

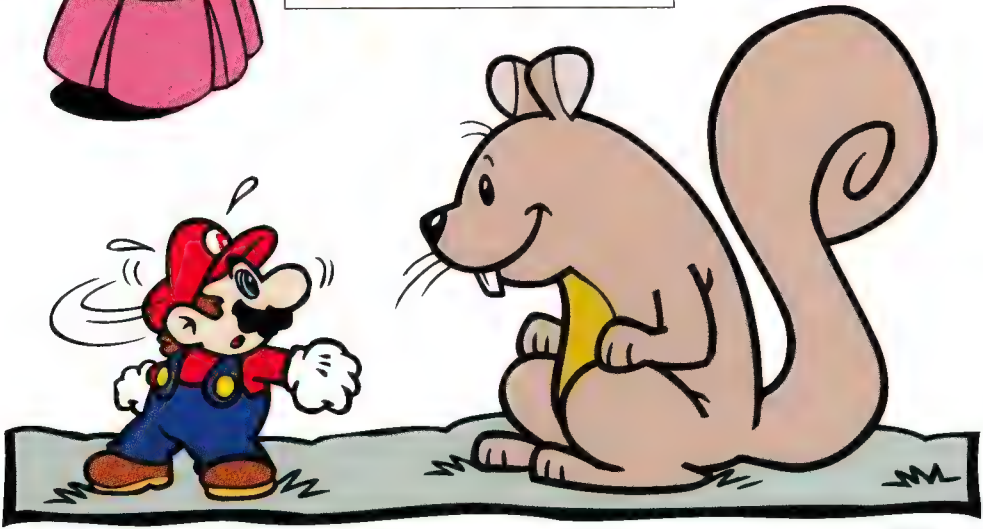

Illustration: Gary Fields

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Squirrels

The black giant squirrel of Asia can grow to be 3 feet (90 cm) long from head to tail. Its coat is black, and its belly is pale yellow.

3 **Some squirrels grow to be 3 feet (90 cm) long.**

© G. Lacz / Sunset

The Eurasian red squirrel has a rusty red coat. It's found in Europe and Asia.

Squirrels are rodents, related to rats and mice. Most squirrel species live in trees, but some, like the Barbary ground squirrel of Africa, make their homes in undergrowth. Some even burrow underground.

Fancy Fur

Most North American squirrels have gray coats; sometimes with white bellies. The American red squirrel has a reddish cast to its gray fur. The unusual tassel-eared squirrel of the American southwest is dark gray with fur-tufted ears, and its tail can be pure white.

Flying Leap

Found in North America, Europe and Asia, flying squirrels have an unusual body structure that allows them to glide through the air. A thin membrane connects their front and hind legs. When they jump from a branch, they stretch out their legs and the membrane forms a sort of parachute that keeps them aloft.

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Can insects control insect pests on crops?

WILD ANIMALS

1 Yes

2 No

Illustration Gary Fields

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Pest Control

Before there were chemical insecticides, farmers used natural methods to control pests on crops. Some farmers still use these effective means of pest-control.

1 Yes, insects can help control pests on crops.

© Animals Animals / Sunset

Ladybugs are harmless to humans, and they don't damage crops, but they love to eat aphids and other insect pests.

Insect pests congregate where their favorite food plants grow. For example, aphids are insects that love to feed on vegetables like tomatoes and beans. An infestation of aphids can destroy an entire crop.

Ladybug's Choice

To fight aphids, a farmer could spray crops with chemical insecticides. Or he could bring in ladybugs.

Little red and black ladybugs are an aphid's worst nightmare. Yet, though they love to eat aphids, ladybugs don't eat vegetable plants. So, ladybugs help farmers keep aphids under control without chemicals, which taint soil and harm birds and other creatures.

Pest Control

Other insects, such as lacewings and some wasps; certain birds, such as robins; and reptiles, such as lizards, also eat insect pests without damaging crops.

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Where do woodpeckers nest?

WILD ANIMALS

1. At the tops of trees
2. In the trunks of trees
3. Under rocks

Illustration: Gary Fields

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Woodpeckers

A woodpecker uses its beak to carve out a nest in a tree trunk. Most woodpeckers live almost exclusively in trees; they rarely touch down on the ground.

2 Woodpeckers nest in the trunks of trees.

© Animals Animals / Sunset

Woodpeckers hollow out nests in the trunks of trees. It's usually the male's responsibility to build the nest for the family.

Woodpeckers feed on insects living under the bark of trees. The birds use their sharp, strong beaks to peck under the wood searching for bugs. Then they extract the bugs with their long, sticky tongues.

Look closely at the trunks of some trees and you'll see a pattern of tiny holes, spiraling up the trunk, where a woodpecker went hunting for food.

Tree-Huggers

A woodpecker's feet are adapted for living and hunting for food in the trees. It spreads out its four toes to get a stable grip, then it digs its sharp curved nails into the tree trunk to hold on tight. The woodpecker's tail is covered with strong feathers that help the bird balance while it pecks.

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Do reindeer exist?

WILD ANIMALS

1 Yes, they are found in cold regions.

2 No, they are extinct.

3 No, they are mythical creatures from Christmas stories.

Illustration: Gary Fields

©1997 Nintendo

Reindeer

Since reindeer thrive in cold weather, they're the perfect choice to pull Santa's sleigh.

1 Yes, reindeer are real creatures that live in cold regions.

© Finnish Tourist Bureau

Though most reindeer are found in the wild, some have been domesticated. The Lapps, native people of Norway, sometimes use reindeer to pull sleds.

Reindeer, also known as caribou, are found in cold northern regions of Scandinavia, Asia, and North America. They travel in herds, migrating to the northern part of their range in the summer and moving to the southern part in winter. Like their relatives, deer and moose, reindeer are grazers. They nibble on grasses, lichen, and moss.

Warm Winter Coat

A reindeer's coat is thick, heavy, and waterproof. In the summer, it is dark brown, but in winter the coat turns whitish gray. Because their coats are so heavy and warm, reindeer have to migrate north in summer. They need to be where it's cool enough for them to be comfortable.

The reindeer's hooves are wide and flat, perfect for walking in deep snow.

The reindeer's most distinctive feature are its huge antlers. Both males and females grow antlers, though the male's tend to be larger and heavier.

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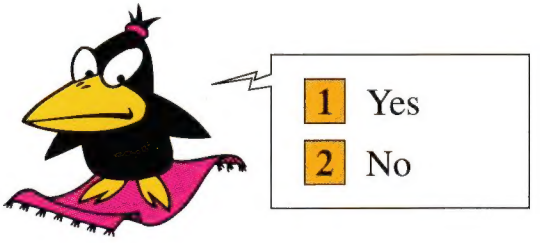
Have chimpanzees been trained to talk?

WILD ANIMALS



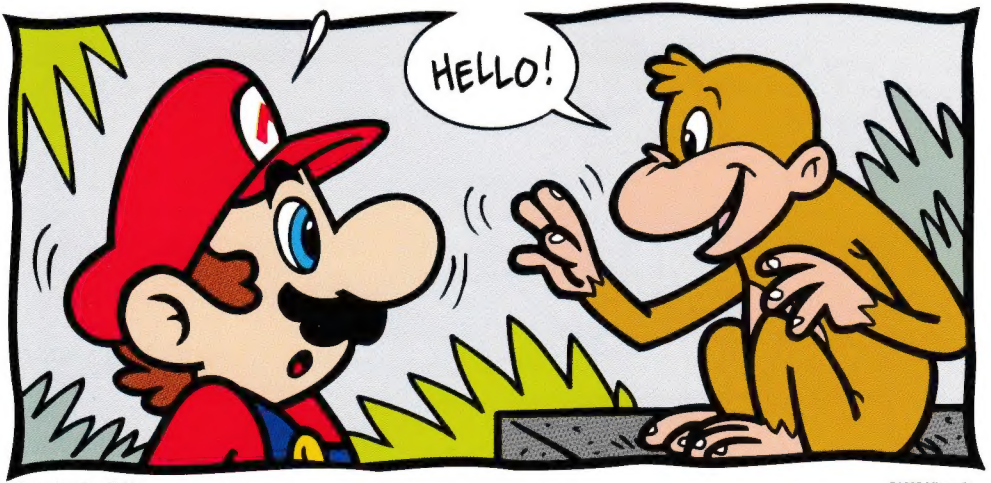


Illustration: Gary Fields

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Chimpanzees

Among the smartest of all mammals, chimpanzees exhibit behavior that is remarkably like humans'.

2 No, chimpanzees cannot talk.

© Klauss / Sunset

If this chimp really answered the phone he wouldn't have much to say. Chimps can't talk!

Chimpanzees in the wild know how to use tools—such as poking sticks into termite nests to pull out the insects to eat. Trainers and researchers have taught chimps to perform a variety of tasks. In Thailand, chimps are sometimes used to harvest coconuts from trees!

Speechless

Though they may behave like humans in many ways, chips do not talk like humans do. Zoologists have identified thirteen types of noises and calls made by chimps. They include quiet, peaceful grunts and piercing howls and screeches. None resemble human sounds.

Chimps have been taught to communicate in a human way, however. Some researchers have taught them to use sign language, similar to that used by deaf or hearing impaired people. Using this language, the chimps can identify objects, but cannot "converse" with humans.

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Which is a grasshopper's organ of smell?

WILD ANIMALS

1 Antennae

2 Legs

3 Wings

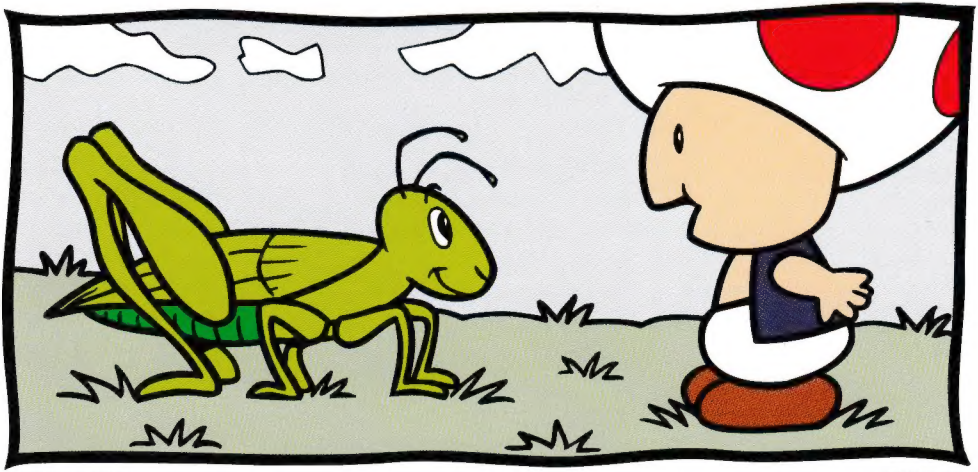

Illustration: Gary Fields

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Grasshopper

In some parts of the world people eat grasshoppers—dried, roasted, or ground up into a paste.

1 **Antennae are a grasshopper's organ of smell.**

© G. Lacz / Sunset

A group of grasshoppers is called a "cloud."

Grasshoppers are known for their ability to leap. Their legs are adapted for this purpose, with large upper leg muscles that provide the power to jump. The upper legs also are lined with tiny ridges. When the grasshopper rubs these legs against its wings it produces a humming sound.

Grasshoppers are found in grasslands as well as dry and tropical regions. They feed on plants; and birds, frogs, and snakes feed on grasshoppers.

Pest Control

The species known as the short-horned grasshopper, or locust, is a highly destructive pest. Locusts consume as much as their own body weight in food every day. A swarm of locusts will devastate crops throughout a region. The worst of the locusts is the desert locust, found mainly in the Middle East and Asia.

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